

VOLUME-II

Environmental Impact Report and Index of Agency Responsibilities

San Francisco Bay Area **Environmental Management Plan**

June 1978

INSTITUTE OF GOVERNMENTAL
SERVICES LIBRARY

AUG - 1 1980

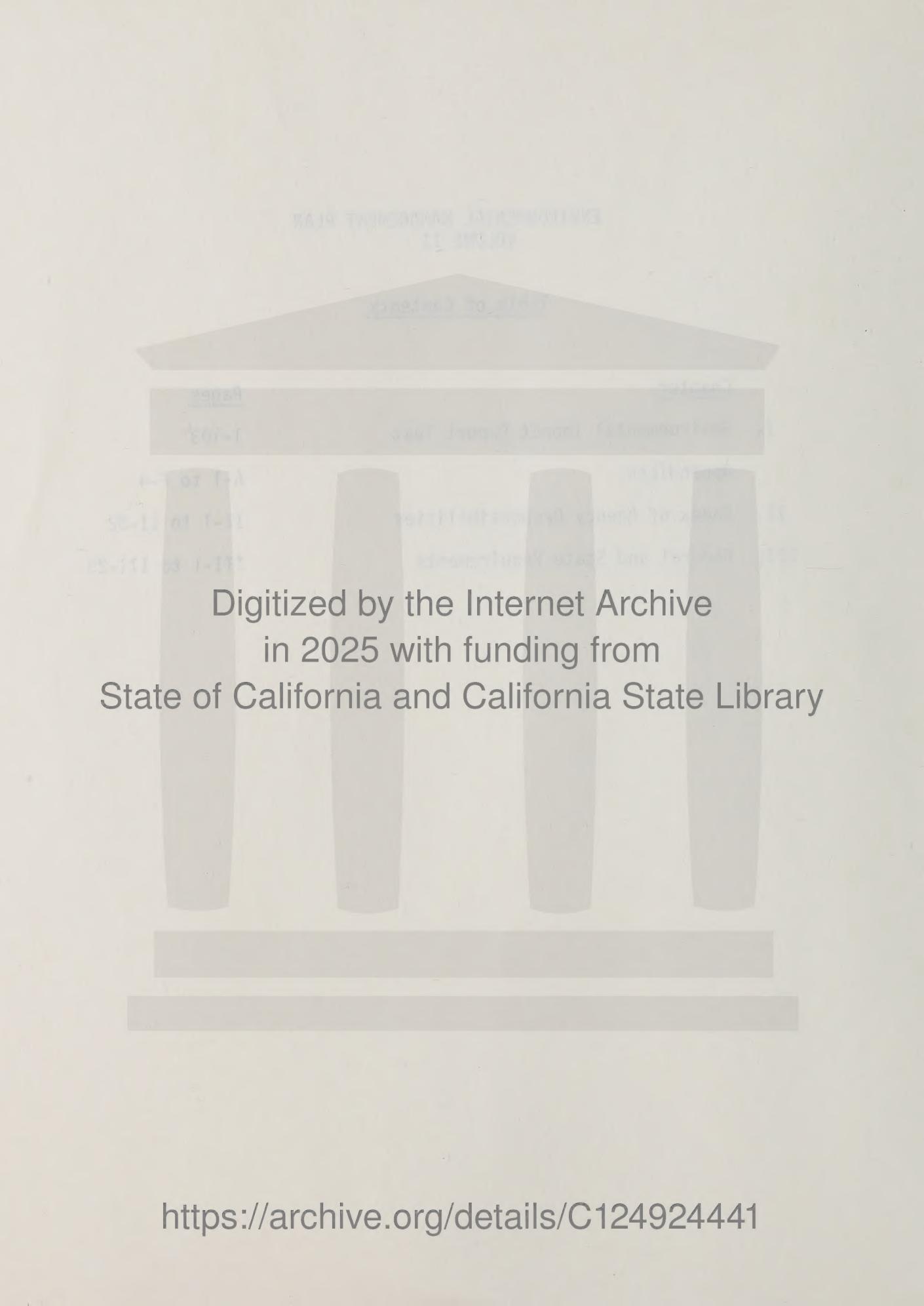
UNIVERSITY OF CALIFORNIA

This plan was prepared by the Association of Bay Area Governments with a grant and other assistance from the Environmental Protection Agency, in cooperation with Bay Area Air Pollution Control District, Metropolitan Transportation Commission, San Francisco Bay Regional Water Quality Control Board and Counties of the Bay Area with assistance of these agencies: ■ Army Corps of Engineers ■ California Air Resources Board ■ California Department of Health ■ California Department of Transportation ■ Council of Bay Area Resource Conservation Districts ■ Governor's Office of Planning and Research ■ Lawrence Berkeley Laboratory ■ Lawrence Livermore Laboratory ■ San Francisco Bay Conservation and Development Commission ■ State Water Resources Control Board ■ State Solid Waste Management Board ■ Wastewater Solids Study

ENVIRONMENTAL MANAGEMENT PLAN
VOLUME II

Table of Contents

<u>Chapter</u>	<u>Pages</u>
I. Environmental Impact Report Text	1-103
Appendices	A-1 to F-4
II. Index of Agency Responsibilities	II-1 to II-82
III. Federal and State Requirements	III-1 to III-23



Digitized by the Internet Archive
in 2025 with funding from
State of California and California State Library

<https://archive.org/details/C124924441>

ASSOCIATION OF BAY AREA GOVERNMENTS

GENERAL ASSEMBLY RESOLUTION NO. 1-78

CERTIFICATION OF FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE ENVIRONMENTAL MANAGEMENT PLAN

WHEREAS, the Draft Environmental Impact Report for the Environmental Management Plan, containing the elements required by the California Environmental Quality Act and the State guidelines, has been prepared and disseminated for review and comment by interested public agencies and members of the public; and

WHEREAS, substantial changes to the Draft Environmental Management Plan were made by the Association's Environmental Management Task Force, Regional Planning Committee and Executive Board; and

WHEREAS, a supplement to the Draft Environmental Impact Report was prepared in accordance with the State guidelines requiring such preparation when substantial changes are proposed; and

WHEREAS, a notice of completion of the Draft Environmental Impact Report and Supplement thereto has heretofore been filed with the State of California Resources Agency, Secretary of Resources, and a copy forwarded for review and comment to the Governor's Office of Planning and Research, as the State Clearinghouse; and

WHEREAS, written comments on the Draft Environmental Impact Report were accepted until March 31, 1978, and comments on the Supplement to the Draft Environmental Impact Report were accepted until June 1, 1978; and

WHEREAS, three public hearings were held at different locations in the San Francisco Bay Area for receipt of comments on the Draft Environmental Impact Report; and

WHEREAS, in addition, comments were received from interested public agencies and members of the public; and

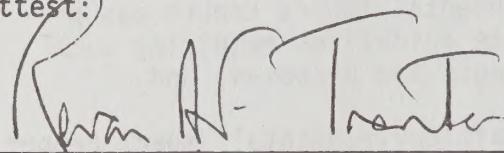
WHEREAS, there has now been included in the Environmental Impact Report document an appendix presenting oral and written comments on the Draft Environmental Impact Report, and Supplement thereto, received during the review period and at the public hearings, together with responses to significant environmental points raised in the review and consultation process, all as required under Section 15146 of the State guidelines; and

WHEREAS, this Assembly has reviewed and considered the information contained in the Final Environmental Impact Report document;

NOW THEREFORE BE IT RESOLVED that the General Assembly of the Association of Bay Area Governments, as the decision-making body having final approval authority over the Environmental Management Plan, certifies that the Final Environmental Impact Report (a copy of which is attached hereto marked Exhibit "A") has been completed in compliance with the California Environmental Quality Act and the State guidelines, and that it has reviewed and considered the information contained in the Final Environmental Impact Report prior to adoption of the Environmental Management Plan.

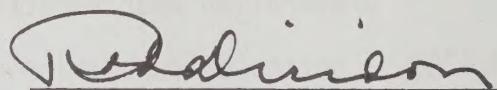
The foregoing resolution was passed by the General Assembly this 10th day of June, 1978.

Attest:



Revan A.F. Tranter
Executive Director

Signed:



Rod Diridon
President

ENVIRONMENTAL IMPACT REPORT FOR THE ENVIRONMENTAL MANAGEMENT PLAN

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
EXPLANATORY NOTE ON CHANGES MADE TO THE DRAFT ENVIRONMENTAL MANAGEMENT PLAN	1
INTEGRATED ASSESSMENT AND PLANNING	4
SUMMARY	7
THE ASSESSMENT PROCESS	8
THE TECHNICAL APPROACH	9
SUMMARY	17
EXPLANATORY NOTE ON TECHNICAL PROCESS DOCUMENTATION	18
THE ENVIRONMENTAL SETTING OF THE REGION	19
THE PHYSICAL ENVIRONMENT	19
THE SOCIAL ENVIRONMENT	20
IMPACTS OF THE WATER QUALITY MANAGEMENT PLAN	25
DESCRIPTION OF THE PROPOSED PROJECT	25
THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	26
ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS	29
ALTERNATIVES TO THE PROPOSED ACTION	31
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	38
ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	38
THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS	39

TABLE OF CONTENTS
(Continued)

	<u>Page</u>
IMPACTS OF THE WATER SUPPLY MANAGEMENT PLAN	41
DESCRIPTION OF THE PROPOSED PROJECT	41
THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	41
ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS	43
ALTERNATIVES TO THE PROPOSED ACTION	45
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	47
ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	48
THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS	48
IMPACTS OF THE SOLID WASTE MANAGEMENT PLAN	50
DESCRIPTION OF THE PROPOSED PROJECT	50
THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	51
ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS	54
ALTERNATIVES TO THE PROPOSED ACTION	55
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	61
ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	61
THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS	61

TABLE OF CONTENTS
(Continued)

	<u>Page</u>
IMPACTS OF THE AIR QUALITY MAINTENANCE PLAN	62
DESCRIPTION OF THE PROPOSED PROJECT	62
THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	62
ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS	67
ALTERNATIVES TO THE PROPOSED ACTION	68
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	93
ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENT CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	94
THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS	94
IMPACTS OF THE DRAFT ENVIRONMENTAL MANAGEMENT PLAN	95
DESCRIPTION OF THE PROPOSED PROJECT	95
THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT	95
ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS	96
ALTERNATIVES TO THE PROPOSED ACTION	96
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	96
ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	96
THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTION	97

TABLE OF CONTENTS
(Continued)

	<u>Page</u>
FINDINGS UNDER SECTION 15088 OF THE "STATE EIR GUIDELINES"	98
AGENCIES, ORGANIZATIONS AND INDIVIDUALS COMMENTING ON THE DRAFT EIR AND SUPPLEMENT TO THE DRAFT EIR	102
PREPARATION OF THIS DOCUMENT	102
FOOTNOTES	103
APPENDIX A	A-1
CANDIDATE CONTROL MEASURES FOR THE ENVIRONMENTAL MANAGEMENT PLAN	
APPENDIX B	B-1
ASSESSMENT CHECKLIST FOR THE ENVIRONMENTAL MANAGEMENT PLAN	
APPENDIX C	C-1
BIBLIOGRAPHY OF TECHNICAL MATERIALS	
APPENDIX D	D-1
COMMENTS FROM PUBLIC HEARINGS ON THE DRAFT EMP AND DEIR AND STAFF RESPONSES	
APPENDIX E	E-1
WRITTEN COMMENTS AND RESPONSES ON THE DRAFT EIR	
APPENDIX F	F-1
WRITTEN COMMENTS AND RESPONSES ON THE SUPPLEMENT TO THE DEIR	

INTRODUCTION

The Environmental Management Plan (EMP) for the San Francisco Bay Area provides a comprehensive approach for managing the region's water quality, water supply, solid waste, and air quality. It is the first attempt to integrate these subjects on a regionwide basis.

The specific goals of the Environmental Management Plan are stated in the Work Program, issued in April of 1976: "The goal of the program is to produce an Environmental Management Plan that has the following characteristics:

- *It will lead to the greatest possible improvement in water and air quality and problems caused by solid waste, and will lead to compliance with Federal and State standards and objectives at the earliest possible date.
- *It will not have social, economic, or environmental effects so unacceptable as to prevent implementation."

That goal indicates that identification of impacts would play a key role in the plan development process. It also constitutes a determination that the EMP would have significant effects.*

EXPLANATORY NOTE ON CHANGES MADE TO THE DRAFT ENVIRONMENTAL MANAGEMENT PLAN

The draft Environmental Management Plan and draft EIR were published in December 1977 for public review and comment. During the ensuing months, both written and oral testimony were solicited. By the end of the formal review period (March 31, 1978), more than 1,500 pages of comments and proposed revisions were received. Three public hearings (February 1, 1978, San Jose; February 8, 1978, Berkeley; and February 16, 1978, San Francisco) were held on the draft plan and DEIR. Three public discussions (January 11, 1978, Berkeley; January 25, 1978, Napa; March 16, 1978, San Rafael) were also held on the draft plan.

With the benefit of considerable public review and comment, and numerous proposed revisions to the policies and actions recommended in the draft EMP, three policy bodies took action on the draft plan. On March 16, 1978, the 46-member Environmental Management Task Force (EMTF) completed its review of the complex and integrated document whose development it had guided during the two-year planning period. The EMTF recommended an amended Environmental Management Plan to the

*Section 15080(a) of the State EIR Guidelines requires the Lead Agency (in this case ABAG) to "conduct an Initial Study to determine if the project may have a significant effect on the environment unless the agency can determine that the project will clearly have a significant effect." Although the EMP's purpose is to benefit the environment of the Bay Area by recommending actions to meet Federal and State standards and objectives, in recognition of the significance of the issues being addressed and the commitment to identify the impacts of the plan, ABAG determined that an Environmental Impact Report was necessary.

Association's Executive Board via the ABAG Regional Planning Committee. On April 5, 1978, the RPC considered the plan, as amended by the EMTF, reviewing it for consistency with the Regional Plan (Upon adoption, the EMP will become the environmental quality chapter of the Regional Plan.). The Executive Board took action on April 20, 1978, proposed an Environmental Management Plan for adoption by the General Assembly on June 10, 1978, in San Jose.

The EMP forwarded to the General Assembly differs somewhat from the draft EMP released in December 1977. The majority of the changes to the December 1977 version of the draft EMP involved consolidations, reorganization, clarification and changes in responsible agency (ies) designation. The significant environmental effects of those changes do not differ from those identified in the original draft EIR released in December 1977. However, changes in the air quality maintenance plan (AQMP) portion of the EMP involved deletion of one set of maintenance measures (land use controls) and substitution of another set (a combination of further stationary, mobile source and transportation controls). The substitute maintenance measures, identified for further analysis in the continuing planning process, were selected from an extensive list of alternative control measures. The significant environmental effects of the substitute maintenance measures were described in a supplement to the draft EIR. The supplement was released in late April. The thirty-day review and comment period on the supplement to the DEIR ended June 1, 1978.

As required by the California Environmental Quality Act and implementing "State EIR Guidelines," this final EIR is prepared and consists of:

1. A revision of the DEIR to reflect all changes made to the draft EMP (including deletion of land use measures in the AQMP and substitution of another set of maintenance measures) and comments and recommendations received on the DEIR and Supplement to the DEIR.
2. Comments received on the DEIR and Supplement to the DEIR, and responses to significant environmental points raised in the review process.
3. A list of persons, organizations and public agencies commenting on the DEIR and the Supplement to the DEIR.
4. Findings under Section 15088 of the "State EIR Guidelines."

INTEGRATED ASSESSMENT AND PLANNING

Comprehensive environmental planning requires a comprehensive approach for impact identification. During the planning process, the potential environmental, institutional/financial, economic and social impacts were identified using an assessment process designed as an integral part of the planning process. While somewhat broader in scope than required, identification of those impacts addresses the requirements of Section 208 (b)(2)(E) of the Federal Water Pollution Control Act Amendments. That subsection requires the identification of environmental, economic and social impacts of carrying out the plan prepared to meet the other requirements of Section 208. The EMTF asked that impacts of all elements of the plan be identified. The full range of potential impacts is contained in Volume I of the EMP.

This document assesses the environmental affects of the EMP, as required by the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). NEPA requires an assessment of the positive and negative effects of a proposal on the environment. CEQA is a more limited statute in that it requires assessment of significant environmental effects.

Section 15040 of the State EIR Guidelines defines significant environmental effects - "significant effect on the environment means a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the activity including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." This document discusses significant environmental effects, which are defined by CEQA as adverse environmental effects. It also discusses positive environmental effects to meet NEPA requirements. In keeping with CEQA mandates, the significant adverse environmental effects are those impacts for which mitigation is discussed.

The assessment of the Environmental Management Plan is somewhat different from the typical project assessment, which is more commonly the subject of this type of document. The National Environmental Policy Act (CEQA) are primarily intended to require the full disclosure of the impacts of proposed projects on the physical environment. This legislative intent has been interpreted to include planning documents as well as project proposals. The Environmental Management Plan is a comprehensive one for the protection of the Bay Area's water and air quality, for the effective management of the region's water supply, and for solid waste management. These problems are interrelated. Therefore the plan is integrated--to ensure that solutions to one set of environmental problems do not have adverse impacts on other environmental problems, or, if such adverse effects are identified, to ensure that appropriate mitigation measures are developed. For example, the wastewater facilities programs recommended in the plan will increase the volumes of sewage sludge, which may contribute to the solid waste problem. The solid waste plan, therefore, deals with resource recovery and effective use of the sludge. Yet while the plan as a whole is integrated, the individual parts of the plan are designed to satisfy different regulatory requirements. As an example, the air quality maintenance plan has to meet very explicit, quantitative standards (e.g. demonstrate numerical attainment of the Federal photochemical oxidant standard of 0.08 ppm, and maintenance of the standard in a specified time frame). On the other hand, the surface runoff portion of the water quality management plan is required to identify non-point sources of pollution and set forth procedures and methods, e.g. best management practices, to control the sources to the extent feasible. Unlike point source pollution control, no quantitative effluent standards to meet the water quality standards in the receiving water body govern the nonpoint source control programs selected in each county.

All of these conditions influenced the development of the plan. It is a policy level plan with associated implementing actions. The plan will be carried out by many levels of government--Federal, State, regional, counties, cities and special districts--as well as by private interests. This fact particularly affects the level of detail presented in the plan. It is not, nor should it be, of project specific detail in either the exact specification of controls or in the manner of implementation. That level of specificity is a subsequent

step in environmental control planning (e.g. the 201 facilities planning process, air quality control technology assessment, etc.). As a result, the range of possible alternatives differs from plan to plan. The alternatives considered and the policies and actions included emanate from extensive technical analysis and assessment. The EIR discussion of alternatives describes the feasible alternatives to each plan as a whole and the policies that compose each plan. In a majority of the cases, there were specific alternatives to each recommended policy, either of a technical or administrative nature. Given the divergency of statutory and regulatory requirements in combination with technological considerations, the alternatives may not always be as numerous as one is used to reviewing in a project level EIR. The no action alternative is one alternative that must always be considered in the preparation of a plan or project, and in several cases it was the only feasible alternative for consideration. Given that there are substantial environmental problems that remain to be solved in the Bay Area and given the assigned, contractual obligation to develop a plan to do that, the "no action" alternative would not meet either the goals of the plan or the contractual obligations.

The plan will be implemented in phases. As noted on the tables of policies and actions in Volume I of the EMP, actions are scheduled for implementation at various times during the next ten to twenty years. Additionally, an important ingredient is the continuing planning process. That mechanism allows for changing conditions, data and requirements to be considered and factored into future plans and recommendations. The site specific projects necessary to meet the objectives laid out in the plan would then be subject to NEPA and CEQA requirements for documentation of environmental impacts of the proposed actions and alternatives to the proposed actions. Impact identification will retain an integral role in the refinement and specification of alternatives during the continuing planning process for environmental management in the Bay Area.

IMPACT ASSESSMENT REQUIREMENTS

The EMP addresses four major environmental issues facing the Bay Area. It defines these major environmental problems and indicates what steps are necessary to solve them. The plan is intended to meet key Federal and State environmental standards and objectives. Federal and State statutes, regulations and guidelines govern the development of the EMP. Those which are particularly relevant to the assessment process and impact identification are described below.

The National Environmental Policy Act of 1969 (NEPA)

NEPA was enacted by Congress and signed into law on January 1, 1970. Section 102 requires, in part, that all Federal agencies prepare detailed statements of the environmental impacts of "every recommendation or report on proposals

for legislation and other major Federal actions significantly affecting the quality of the human environment." Most Federal agencies have published regulations and guidelines outlining their procedures for complying with NEPA. In order to comply with the Act, the Federal agency either prepares an Environmental Impact Statement (EIS) or files a Negative Declaration indicating the absence of environmental impact.

In general, Federal agencies which administer grant programs (in this case the Environmental Protection Agency) require a grantee (in this case ABAG) to prepare an assessment of the grantee's proposed project or plan prepared with Federal assistance. The Federal agency, however, retains responsibility for issuance of the EIS or Negative Declaration.

The California Environmental Quality Act (CEQA)

This law is the State's counterpart to NEPA. CEQA requires that if the Lead Agency (in this case ABAG) determines that the proposed project will have a significant effect on the environment, an Environmental Impact Report (EIR) will be prepared to assess the significant effects. A plan, such as this Environmental Management Plan, is considered a "project" for the purposes of CEQA. This EIR is prepared (as permitted by law) to fulfill the requirements of NEPA and CEQA. To meet the requirements of an EIR, it addresses these topics:

1. The significant environmental effects of the proposed project.
2. Any significant environmental effects which cannot be avoided if the proposal is implemented.
3. Mitigation measures proposed to minimize the significant effects.
4. Alternatives to the proposed action.
5. The relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity.
6. Any significant irreversible environmental changes which would be involved in the proposed action should it be implemented.
7. The growth inducing impact of the proposed action.

This EIR document is organized such that the assessment of the significant environmental effects of each plan element (that is, water quality, water supply, solid waste, and air quality) and of the entire EMP constitute an EIR. All of the above topics are discussed as required by CEQA.

The Federal Water Pollution Control Act

Congress amended the Federal Water Pollution Control Act in 1972. Section 208 of Public Law 92-500 describes the areawide waste treatment management planning program, which authorized preparation of the EMP. Section 208 emphasizes that areawide planning is a process. Part (b) (2) (E) of the section requires that any plan prepared under this process include "...the identification of the measures necessary to carry out the plan...and the economic, social and environmental impacts of carrying out the plan...." The EMP planning process, as required by statute, integrated impact identification into plan development.

Section 511(c) of the Act states that, with the exception of the construction grants program for wastewater treatment facilities and the new source permit program, no action taken under the law would be considered a "major Federal action" triggering the requirement for an EIS. However, in subsequent policy statements, guidelines and regulations EPA reapplied the EIS requirement to preparation of Section 208 plans.*

EPA has emphasized the importance of environmental, economic and social impact identification. EPA "Guidelines for State and Areawide Water Quality Management Program Development" (November 1976) provides guidance on "...integrating environmental, social and economic impact evaluation into the planning process." It further instructs that "...the evaluation must be viewed as an integral part of the planning process. As such, it will be performed throughout the process rather than after the selection of the plan, with citizens and local units of government afforded the opportunity to participate in impact evaluation from the beginning of the planning process."** Chapter III of Volume II of the EMP describes the public participation aspects of the plan development and implementation process.

The plan describes the actions necessary to meet key Federal and State air and water quality standards and solid waste management objectives. As an integrated plan for managing the physical environment, it is virtually self-mitigating. Meeting air quality standards will have water quality and solid waste impacts. Meeting solid waste objectives will have impacts on water quality and air quality. Managing water supply and meeting water quality standards and objectives will have air quality and solid waste impacts.

Because the Environmental Management Plan is the result of an integrated planning process, the impacts of one plan on another are identified and most of the significant adverse environmental effects of each plan may be mitigated by the other plans.

The Federal Water Pollution Control Act was again amended in 1977. Requirements of the new law will be met during the continuing planning process.

The Clean Air Act

Congress amended the Clean Air Act in 1970. The air quality maintenance plan portion of the EMP was prepared under its authority. Actions taken under the Clean Air Act are generally not subject to the provisions of NEPA, and thus the EIS requirements would not normally be applicable to the AQMP.

However, because the AQMP is an integral part of the EMP, identification of the impacts of air quality control measures and strategies proceeded during this planning effort. CEQA obligations apply to the AQMP so that an assessment of the significant environmental effects of the AQMP is required.

Congress again amended the Clean Air Act in 1977. The AQMP meets several of the requirements of the 1977 act. Nevertheless, it is not the non-attainment

* "Final Regulations - Preparation of Environmental Impact Statements," 40 CFR, No. 72, Part III, Subpart E. Section 6.504 (a)(1) lists administrative actions covered by EIS Regulations and includes "approval of all section 208 plans according to procedures in 40 CFR 25.1067-2.

** Chapter 13

plan required by those amendments. That plan will be prepared during the first few months of the continuing planning process for environmental management in the Bay Area.

The Resource Conservation and Recovery Act (RCRA)

RCRA is the Federal law enacted in 1976 to provide policy guidance on solid waste management. Actions required by it are not subject to the provisions of NEPA, and thus plans prepared to comply with RCRA are not subject to NEPA requirements for an environmental assessment. However, the same reasoning applies to the Solid Waste Management Plan portion of the EMP as to the Air Quality Maintenance Plan portion--both are an integral component of the overall EMP, and the impacts of recommended controls were identified in the planning process. Federal regulations also underscore this notion. Section 6.702(a) (1) (iii) of the "Final Regulations - Preparation of Environmental Impact Statements" states that "...grant applications for the development of comprehensive State, interstate or local solid waste management plans will not require environmental assessment...(however)...a detailed analysis of environmental problems and effects should be part of the planning process."

SUMMARY

The next section describes the assessment process developed to ensure that a comprehensive identification of the impacts occurred as an integral part of the planning process which resulted in the EMP. The process used a broad interpretation of Federal and State requirements for impact identification. The information resulting from the assessment process identifies the potential environmental, institutional/financial, economic and social impacts of plan recommendations. That impact information appears in each chapter of Volume I of the EMP in summary form on the plan recommendation tables.

The identification of the full range of impacts of the EMP complies with the requirements of Section 208(b) (2) (E) to identify environmental, economic and social impacts. It also fulfills the objectives stated in the Work Program goal statement.

This EIR fulfills the obligations of the California Environmental Quality Act to assess the plan's significant effects on the environment.

THE ASSESSMENT PROCESS

The objective of the assessment process developed for the environmental management planning process is to identify the full range of impacts that might be associated with actions taken to meet air, water and solid waste standards and objectives. The process incorporates several assessment techniques developed since the passage of NEPA. Integrated planning and assessment is iterative in nature. In other words, there are many steps in the process of moving from a large number of potential control measures to those selected for recommendation in the plan. The control measures are reassessed several times, each time in greater detail. Each time, the impacts identified serve as a basis for screening out control measures that do not meet the two objectives of the goal statement of the EMP.

Four levels of impact identification occur during the planning process:

- Level One** - Identification of the impacts of the candidate control measures* for each element of each management plan
(Air quality - stationary sources, mobile sources, transportation controls and land use development controls; Water Quality - municipal, industrial, surface runoff and miscellaneous source controls; Water Supply - supply, conservation and reuse; Solid Waste - municipal, hazardous, resource recovery and sewage solids).
- Level Two** - Identification of the impacts of the policies and actions developed for inclusion in the four draft management plans
(Air quality, water quality, water supply and solid waste)
- Level Three** - Identification of the overall impacts of each of the four management plans
- Level Four** - Identification of the cumulative impacts of each plan and thus the entire EMP.

The Assessment Advisory Committee** oversees development of the assessment process and the selection of techniques for impact identification. Surface runoff was a major problem to be addressed. Eight counties in the region contracted with ABAG to develop a county surface runoff control plan (San

* See Appendix A for a list of the candidate control measures for each management plan.

** The Assessment Advisory Committee (AAC) is one of several technical advisory committees established with the consent of the Environmental Management Task Force, the policy advisory committee of the Environmental Management Program. The Planning Procedures Committee, an EMTF subcommittee, directed the formation of the AAC. The AAC is composed of approximately 40 individuals from public agencies, private industry and citizen and environmental groups. Individuals on the committee have experience in impact assessment or expertise in fields such as environmental law, economics and finance.

Francisco had prepared such a plan as part of its wastewater treatment facility planning effort prior to initiation of the EMP effort). Because so many different agency staffs were to be involved in preparing the county surface runoff control plans, ABAG staff felt it important to develop an assessment manual for use by the county staffs in plan preparation. That manual also serves as a prototype for the assessment process used for the entire EMP. The Assessment Procedures Manual was completed in March 1977. The assessment process and tools for impact identification were used by all participants in development of the EMP (ABAG, Metropolitan Transportation Commission, Bay Area Air Pollution Control District, the Wastewater Solids Study, the eight Bay Area county lead agencies and consultants).

The main assessment techniques included in the assessment process and incorporated in the Assessment Procedures Manual are described below.

THE TECHNICAL APPROACH

The Assessment Checklist

Checklists are commonly used tools in environmental impact assessment.¹ They generally present a list of physical environmental characteristics to look at for possible impacts. The Assessment Checklist developed for use in the EMP assessment planning process is more comprehensive in that it is not limited in coverage to physical environmental characteristics. The four major categories of the Assessment Checklist are:

- Environmental Criteria
- Institutional/Financial Criteria
- Economic Criteria
- Social Criteria

The EMTF approved the concept of a checklist and the major categories and referred further development to the Planning Procedures Committee. That committee expanded upon the first draft Checklist (prepared by staff in September 1976) and directed staff to work with the Assessment Advisory Committee. At a series of roundtables held in the nine Bay Area counties in the Fall of 1976, citizens reviewed the criteria on the draft Checklist and proposed additional criteria. Other technical advisory committees also reviewed the draft Checklist. At the November 10, 1976 EMTF meeting, after adding criteria to the list, the Task Force approved an Assessment Checklist (See Appendix B) in final form for use in the EMP planning process.

The approved Assessment Checklist contains more than 100 factors organized into 16 subcategories under the original four major categories. There is no implied weighting of importance in the organization nor are the categories mutually exclusive. Not every factor is applicable to every control measure or plan. The Assessment Checklist merely provides a starting point for impact identification by displaying a large number of factors or criteria potentially impacted by environmental management activities.

Matrix Analysis

The assessment process incorporates matrix analysis, another common impact assessment technique.²

As used in impact assessment, a matrix is a rectangular array of elements in columns and rows offsetting activities against a checklist of potential impacts. A matrix analysis identifies cause-effect relationships. The matrix analyses conducted during the EMP planning process uses the 16 major subcategories of the Assessment Checklist as the column headings and indicates the relative magnitude of the potential impacts.* An example matrix analysis appears in Figure 1. Unlike most matrix analyses that identify only direct adverse impacts, the matrix analysis portion of the EMP assessment process identified impacts (positive and negative) of both a direct and indirect nature.

Matrix analysis also serves a screening function. It indicates where no identifiable link exists (no impact) between an activity and a potential impact. It focuses the impact prediction on the pertinent assessment factors.

Networking

The assessment process also uses networking.³ Networking is a means of recognizing that a series of impacts can be triggered by an action or an impact of an action. For example, should the supply of agricultural lands or production on those lands decrease as the result of a control measure or policy, then economic impacts can be expected (e.g. changes in profits, prices of goods, wages). An impact on fiscal resources (local government revenues) may result from financing a control measure with any number of available financing mechanisms. The financing mechanism (property tax, user charges, etc.) may have social impacts as some financing mechanisms impact special population groups such as the elderly, low-income and minority groups differently. Another example of networking relates to secondary growth impacts. Secondary growth impacts often result when provision of infrastructure (roads, wastewater treatment facilities, reservoirs) stimulates development. Induced growth is often an indirect effect of such projects. If urban development is stimulated by a control measure, a whole series of subsequent impacts may result. For example, public service levels may be strained (police, fire, schools) and the transportation network may not be adequate to handle the increased traffic associated with the development. The supply of critical physical resources (prime agricultural lands) may be reduced as residential and local serving (shopping centers) development occurs.

*The impact potential is rated as follows:

- A = direct, substantial, immediate and significant impact; requires quantitative analysis if possible
- B = direct or indirect impact that might be significant; requires quantitative analysis if possible to determine significance
- C = indirect impact that is marginal, minor; qualitative discussion is acceptable
- = no significant relationship; no detailed discussion required

FIGURE 1 - EXAMPLE MATRIX ANALYSIS

SURFACE RUNOFF CONTROL MEASURE ASSESSMENT MATRIX

	Air Quality	Water Quality	Physical Resources	Energy	Amenities	Institutional	Financial	Prod. of goods services	Income/ Invest.	Con- sumer Expend.	Hous- ing Supply	Physi- Cal Mobil- ity	Health/ Safety	Sense of Community	Urban Pattern/ Landuse	Equity
I. Prevent Contaminants from Reaching the Surface																
Control chemicals	C	A	B	-	C	A	B	A	A	B	-	-	B	-	-	C
Control dumping & direct discharge	C	A	C	C	B	A	B	B	C	B	-	-	C	B	-	-
Control littering & dogs	C	A	C	-	B	B	B	B	B	B	-	-	B	B	-	C
Control auto and other emissions	A	A	C	A	B	A	B	B	B	B	B	A	B	B	B	A
II. Improve Methods of Collecting or Reducing Contaminant Erosion Prior to Rainstorm																
Street cleaning	B	A	C	C	B	B	A	C	C	C	-	B	B	B	-	-
Clean storm drain system	C	A	C	C	II	C	B	C	-	-	-	-	C	-	-	-
Regrade disturbed areas	C	A	B	-	B	B	B	C	-	-	C	-	B	C	-	-
Reseed or apply veg. cover to bare slopes	-	A	A	C	A	B	B	C	-	-	C	-	B	C	-	-
Control erosion at construction sites	C	A	C	-	C	B	C	C	C	C	C	-	C	-	-	C
Regulate construction schedules	C	A	C	-	C	B	B	C	C	C	B	-	C	-	B	C
Use efficient tillage and plowing practices	C	A	B	C	C	B	C	C	C	C	-	-	B	-	-	C
Insure proper operation of septic tanks	B	A	C	C	C	C	B	C	C	C	C	-	B	C	B	B
III. Reduce Volume and Peak of Storm Water Runoff																
Develop slope density standards	C	A	C	C	B	C	B	C	C	C	C	-	B	C	B	-
Maintain open space	C	A	A	C	A	B	A	C	C	C	B	C	C	C	B	C
Control development patterns	B	A	B	C	C	B	B	C	C	C	B	C	C	C	A	C
Develop buffer strip requirements near streams	-	A	B	-	C	C	C	-	C	-	C	-	C	C	C	-
Develop recreation-al retention basins	-	A	A	-	B	B	B	C	-	C	C	-	C	C	-	-

Assessment Procedures

The assessment procedures developed for a majority of the assessment factors on the Assessment Checklist describe an approach to use in impact identification. Each of the procedures outlined in the Assessment Procedures Manual is divided into three sections (See Figure 2 - Example Assessment Procedure):

Background:

This section discusses the importance of the assessment factor. It also briefly discusses the potential impacts of most concern. An example of an impact of a control measure on the assessment factor appears set off from the background statements.

Impact Questions:

Using a checklist approach again, this section guides the impact prediction and measurement through a series of suggested questions. The questions identify some of the kinds of impacts that a control measure might have on the assessment factor.

Information Sources:

This section supplements the impact questions section. The sources range from agency contacts to printed material such as maps, plans, special studies, and environmental impact documents. The sources provide a data base or more detailed information for use in identifying impacts.

Many assessment procedures cross reference other assessment procedures to indicate that a series of impacts may result from the primary or initial impact. The cross referencing (networking) ensures identification of both primary and secondary impacts.

Each procedure has an accompanying worksheet. The worksheets document the assumptions and information sources used to identify the potential impacts summarized for each control measure, policy or action on the plan recommendation tables in Volume I of the EMP.

Identification of Impacts

Identification of the impacts of candidate control measures (Level 1 assessment) and policies and actions (Level 2 assessment) occurs in three steps.

Step 1 - Matrix Analysis

Using the 16 subcategories of the Assessment Checklist (row) and the candidate control measures or policies and actions (column), a matrix analysis identifies potential cause-effect relationships between column and row entries.

FIGURE 2 - EXAMPLE ASSESSMENT PROCEDURE

Physical Resources

Effect on land sites with special characteristics

- o Effects on lands uniquely suited for seaport, airport, marina or energy site development

Background:

Seaports, airports, marinas and energy facilities play an important role in a region's economy and vitality. Control measures may impact lands uniquely suited for development for those purposes by competing with or preempting sites with such potential. Control measures may also impact the use of sites suited for development for these purposes by affecting the requisite development and/or operation and maintenance activities.

Example - Control measures which consume land (detention basins, treatment facilities, impoundments) could pre-empt development for such special uses if implemented on/adjacent to proposed sites.

- Requirements for minimum amounts of pervious surface for new construction could affect the usefulness of the site for development as (for example) an airport.

Impact Questions:

Would the control measure have an impact on:

A. The Base

1. lands uniquely suited for development as a seaport, airport, marina or energy facility?
2. lands proposed for such use in regional or local general plans or by private industry?

B. The Activities

1. site preparation activities requisite to development?
2. construction, operation or maintenance activities necessary to use the land for a seaport, airport, marina or energy facility?

Information Sources:

Airport Land Use Commissions, County and City Planning Departments, Metropolitan Transportation Commission, Port Authorities, Corps of Engineers.

"Regional Airport System Plan", ABAG, 1972; County Airport Plans, Preliminary - San Francisco Bay Area In-Depth Study - New Facility Analysis, U.S. Army Corps of Engineers-San Francisco 1976; Channels, Ports and Related Facilities Inventory, U.S. Army Corps of Engineers - San Francisco 1973.

Step 2 - Impact Prediction

Focusing on the potential cause-effect relationships noted in Step 1 and using the appropriate assessment procedures, Step 2 involves predicting impacts. The quantified impacts are based on staff assumptions reflecting current information, research, special studies and modeling results and population, land use and economic projections. A summary statement about the potential impacts is noted on the assessment worksheet.

Step 3 - Impact Summary

Summary impact statements appear on the plan recommendation tables organized by the four major categories (Environmental Impacts, Institutional/Financial Impacts, Economic Impacts and Social Impacts) and subcategories. No impact statements are noted where applicable. (See Figure 3 - An Example Assessment Summary Table)

Because many of the actions proposed to carry out the policy statements have similar impacts, common impacts appear beside the policy statements. The impacts specific to the action appear beside the action statement. All impacts identified in the assessment process appear on the plan recommendation tables in Chapter III through VI of Volume I of the EMP.

Level 3 assessment identifies the significant impacts of each of the four management plans (Water Quality, Solid Waste, Water Supply and Air Quality). The section titled "Benefits and Costs of Plan Recommendations" in each chapter of Volume I of the EMP summarizes significant impacts.

The statements in the "Benefits and Costs of Plan Recommendations" section of each chapter constitute an overall assessment of each plan. The overall impacts are general statements about the impacts of the plan. Because site specific applications of the actions are not recommended, the actual impacts will vary depending on how they are implemented, financed and the locations where they are applied. As the actions are carried out by local governments as site specific projects and proposals, the environmental impacts will be identified and assessed as required by NEPA and CEQA. In addition, impact identification will retain an integral role in the continuing environmental management planning process.

The final phase of the assessment process involves identification of the cumulative impacts or the overall impacts of the EMP. Several activities are involved in the Level 4 assessment effort. One is a matrix analysis to identify cross plan linkages (the impact of one plan on other plans). The matrix lists five elements (air, water quality, solid waste, water supply and surface runoff) along the column and the row. The impacts of one plan on the four other plan elements are identified. (Figure 4 displays the results of that exercise).

FIGURE 3 - AN EXAMPLE ASSESSMENT SUMMARY TABLE

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> <ul style="list-style-type: none"> Localized reductions in dust/particulate matter from construction activities. 	<u>Financial</u> <ul style="list-style-type: none"> Direct Public Costs of Implementation <ul style="list-style-type: none"> See County Surface Runoff control Plans Cost Data. See Council of Bay Area Resource Conservation Districts Handbook of Best Management Practices for example costs. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> Employment - Creation of job opportunities may result (e.g., landscape and engineering consultants, construction firms). Increased demand for goods and services may result in some new firms entering market. 	<u>Housing Supply</u> <ul style="list-style-type: none"> Decreased supply (e.g., < 200/acre instead of < 400/acre on slopes > 15%) and increased costs of housing (e.g., the average price of a house may increase \$200-600 - an example design and installation cost of a best management practice) may result where erosion controls are a new component of the development approval process.
<u>Water Quality</u> <ul style="list-style-type: none"> Reduced amounts of sediments and nutrients entering waterbodies from agricultural and construction activities. Reduced siltation of stream channels, lakes and reservoirs and annual sediment loadings to the Bay contributed by land disruption by human activities. Reduced turbidity, algae blooms, and oxygen depletion in streams, lakes and reservoirs. Reduced incidence of impaired use (e.g., water supply) of waterbodies. Reduced amounts of suspended solids available for chemical, pesticide and heavy metal binding. 	<u>Fiscal Effects on Local Governments</u> <ul style="list-style-type: none"> Direct impacts on fiscal resources depend on revenue source(s) used - See County Plans. Permit and plan review fees may offset local costs to implement and enforce. Performance bonds may offset costs of clean-up. Savings in operation and maintenance costs (e.g., in reservoirs) of local governments and special districts may result - an estimated \$5 million is spent annually to alleviate lake problems such as siltation, algae blooms, aquatic weeds, fish kills, etc. 	<u>Income and Investment</u> <ul style="list-style-type: none"> Effects on wages and salaries depends on control measures effects on production and employment. Increased profits for firms benefiting from increased demand for goods and services. Profit of firms and individuals bearing costs of controls should not be affected assuming costs can and will be passed on to the consumer (industry dependent response). 	<u>Physical Mobility</u> <ul style="list-style-type: none"> Localised, temporary disruption in physical mobility during construction activities.
<u>Physical Resources</u> <ul style="list-style-type: none"> Reduced incidence of burial of aquatic bottom organisms and fish kills may result. Indirectly benefits productivity of aquatic community by preventing or reducing interference with photosynthesis, elimination of food sources. Reduced losses of productive topsoil, organic matter should enhance the productivity of agriculture and timber production activities. May indirectly enhance recreation potential and use of waterbodies and adjacent lands. 	<u>Institutional</u> <ul style="list-style-type: none"> Effective implementation would require the cooperation of numerous public agencies such as National Park Services, U. S. Geological Survey, Corps of Engineers, California Department of Fish & Game, Flood Control and Water Districts, cities and counties. New or amended ordinances, regulations or administrative rule-making may be required. Some aspects of erosion control programs may meet with public opposition. Additional staff resources may be required to implement and enforce the recommendations. 	<u>Consumer Expenditures</u> <ul style="list-style-type: none"> Where private industry costs to control erosion are passed on in product prices, costs of goods and services will increase. 	<u>Health and Safety</u> <ul style="list-style-type: none"> Indirect public safety benefits of reduced flood peaks and flood risks associated with siltation and alteration of natural flow regimes in streams. Reduced erosion and mudslide risks. Reduced likelihood of development in hazardous areas with attendant public safety benefits. Reduced conditions conducive to propagation of vectors and other noxious plant and animal species. Retention or debris basins may become a health hazard if water stagnates and vector problems result or a safety hazard (drowning).
<u>Energy</u> <ul style="list-style-type: none"> May indirectly result in energy savings where dredging activities are reduced. 		<u>Direct Private Costs of Implementation</u> <ul style="list-style-type: none"> Example Costs of Erosion Control and Agricultural Management Practices: <ul style="list-style-type: none"> Hydroseeding/Hydrumulching \$425-900/acre Siltation Berm \$7.33/lineal foot Waterway Fencing \$1-2.75/lineal foot Range Seeding \$18/acre Construction erosion controls for 80 unit subdivision may cost \$500-700/acre. 	<u>Sense of Community</u> <ul style="list-style-type: none"> No impacts.
<u>Amenities</u> <ul style="list-style-type: none"> Visual amenity benefits of less turbid waters and reduced eroded areas. Visual amenity benefits of preserving the natural state of the environment. 			<u>Equity</u> <ul style="list-style-type: none"> Indirect impacts on special population groups depends on financing mechanism(s) proposed as well as actual impacts on housing supply and costs.
			<u>Urban Patterns</u> <ul style="list-style-type: none"> Erosion control requirements should not in and of themselves affect urban patterns.

FIGURE 4 - CROSS PLAN LINKAGES

	WATER QUALITY	AIR QUALITY	SOLID WASTE	WATER SUPPLY	SURFACE RUNOFF
WATER QUALITY		(D) Construction & Operation Effects on Air Quality (I) Secondary Growth Effects on Air Quality	(D) Sludge Volume Increases (D) Hazardous Wastes Increases	(D) Increased Process Water Use at treatment facilities (I) Secondary Growth Effects on Supply and Conservation Reuse	(I) Secondary Growth Effects on Surface Runoff Volumes (Increases)
AIR QUALITY	(D) BACT-Effects on Water Quality			BACT-Water use Effects	Reduced lead on streets from vehicle transportation controls improves Surface Runoff Quality
SOLID WASTE	Water Quality benefits from standard compliance Leaching effects on groundwater and surface water	(D) Construction & Operation Effects on Air Quality Vehicle Miles of Travel increases (to landfills) may effect Air Quality		No Impact	More landfill sites may increase runoff problems
WATER SUPPLY	Construction of Reservoirs Tributary to Delta will affect Delta Outflow and Bay Water Quality (I) Secondary Growth Effect on Supply, Conservation; Impacts on sewage treatment plant capacities	(I) Secondary Growth Effects on Air Quality	No Impact		Construction of water supply projects may increase erosion
SURFACE RUNOFF	Water Quality improvements	No Impact	Solids volumes increases from street sweeping, litter control storm system cleaning effects on landfill capacities	Could improve water quality in water supply reservoirs	

D = Direct

I = Indirect

The effects of one plan on another noted here identify the potential effects only. In the overall assessment, many of these effects were found not to be significant, were mitigated or influenced changes in the effected plan to eliminate the effects.

To meet the Federal air quality standard for oxidants, a comprehensive strategy involving source controls, transportation controls, vehicle emission controls and land use controls was developed. During plan integration and cross plan linkage identification, it became clear that all elements of the plan using population and land use and economic data would have to use the same projections to be consistent with the air quality maintenance plan. The major change involved development of a twenty-year project list for sewerage facilities based on compact growth assumptions. That list was included in Appendix J of the Water Quality Management Plan (Chapter III), and indicated the facilities needed to accommodate future population levels (5.4 to 6.1 million in year 2000) in compact development patterns and the timing changes and deletions that would result from different population totals.

The final activity in Level 4 assessment involved assessment of the impacts of compact growth and the overall impacts of the Draft EMP. Compact growth assessment used the Assessment Checklist as a starting point of identifying potential impacts. Using the low population projections not developed compactly as an alternative, the difference between the impacts of accommodating the region's population in the year 2000 in a compact and non-compact development pattern was estimated. That assessment information is available as Assessment/Evaluation Technical Memorandum No. 4, AQMP Technical Memorandum 15.

As a result of public review of the draft EMP, several changes were made (particularly in the AQMP) by the policy bodies overseeing development of the EMP. The land use management/development controls were deleted from the AQMP. Substitute maintenance measures (i.e. control measures to ensure long-term maintenance of the photochemical oxidant standard) were identified for analysis during the continuing planning process. Deletion of the land use management controls required changes in the 20-year project list, plan recommendation tables and the EIR.

The overall cumulative impacts of the EMP are identified and quantified to the extent possible in Chapter II of Volume I of the EMP. That chapter, "Putting this Plan in Perspective," identifies the cumulative impacts, both beneficial and adverse, associated with carrying out the plan.

SUMMARY

The purpose of the Environmental Management Plan is to meet water, air and solid waste standards and objectives without social, economic and environmental effects so significant that the plan could not be carried out. The assessment process identifies the effects of achieving the ends, but also describes the effects of implementing the measures chosen to achieve the ends. Thus, the assessment process explains how facility investments and other public and private resources can be used to achieve water quality, air quality and solid waste goals. The same process also explains how those investments will affect economic, social, fiscal and physical or environmental aspects of the human environment.

The environmental, institutional/financial, economic and social impacts of the policies and actions recommended in each plan (adverse and beneficial) are identified in Volume I of the EMP to aid decision-makers in their consideration of the consequences of their decisions. That impact information appears in summary form and quantified to the extent practicable in the table of plan policies and actions. It is also summarized for each chapter in the section, "Benefits and Costs of Plan Recommendations."

This EIR is written to comply with the requirements of the California Environmental Quality Act. The topics discussed are those required by CEQA identified earlier in this document (page 5). The following sections discuss the potential significant environmental effects of each management plan and the entire EMP and mitigation of the potentially adverse significant environmental effects.

The assessment process used during the EMP planning process to identify the full range of impacts of carrying out the plan aided the assessment of the significant environmental effects of the plan.

Having identified the full range of impacts during the planning process, the assessment of the significance of the effects on the environmental proceeded readily.

Explanatory Note on Technical Process Documentation

Plan development included a technical process consisting of numerous analytic tools (models) and expert technical advice from numerous advisory committees. The technical process is described in detail in the technical memoranda for each management plan. A bibliography of technical materials is included as a section of each management plan. Further details of the population, housing, jobs and land use assumptions used in developing the EMP are contained in the Revised Series 3 Projections, March 15, 1978. Appendices A, B and D through G of the EMP contain the technical memoranda developed to document the technical analysis behind the development of the EMP. Appendix C of this EIR lists major technical memoranda used in preparation of the EMP and this EIR.

THE ENVIRONMENTAL SETTING OF THE REGION

The Environmental Management Plan is a plan for the protection of major features of the environment (the region's air and waters) and reducing the drain on natural resources through solid waste and water conservation and reuse programs. Consequently, much of the environmental setting is described in Volume I of the Environmental Management Plan.

THE PHYSICAL ENVIRONMENT

Water Resources

Section C of Chapter III of Volume I of the Environmental Management Plan describes the water resources of the San Francisco Bay Region, the sources of pollutants that affect them, and the seriousness of existing and future water quality problems. Section C of that chapter is incorporated by reference in this EIR.

Section B of Chapter IV of Volume I of the Environmental Management Plan describes the present water use and supply arrangements for the Bay Area. Section C of that same chapter describes water supply problems in the region. Sections B and C of Chapter IV are incorporated by reference in the EIR.

Solid Waste Management

Sections B, C, and D of Chapter V of Volume I of the Environmental Management Plan describe current solid waste management arrangements in the Bay Area, regional problems identified by countywide solid waste management plans and the physical system for handling solid waste. These sections of Chapter V of Volume I are incorporated by reference in this EIR.

Air Resources

Section 4 of Chapter VI of Volume I of the Environmental Management Plan describes the air quality problems, causes and projections of future problems in the San Francisco Bay Region. That section is incorporated by reference in this EIR.

Land and Other Resources Not Previously Covered

The San Francisco Bay region has unique and varied environmental resources. These special areas include open space, park and wilderness lands, historic places and production areas for agriculture, timber, sand and gravel, and geothermal energy resources. Of equal importance are the scenic opportunities afforded in the region, including the broad views of mountains, ridgeland, hilltops and urban landscapes surrounding San Francisco Bay. The San Francisco Bay region's heritage is reflected in its many cultural resources--historic, architectural and archaeological. These resources contribute to an aesthetically diversified environment. They provide educational and scientific opportunities, are an important part of tourism, and contribute to the unique character of the region.

The historical development of the San Francisco Bay Area is described in Mel Scott's San Francisco Bay Area (Berkeley: University of California Press, 1959) and James E. Vance Jr.'s Geography and Urban Evolution of the San Francisco Bay Area (Berkeley: Institute of Governmental Studies, University of California, 1964). Both publications are incorporated by reference in this EIR. Specific historic, architectural and archaeological resources are listed in the California Department of Parks and Recreation publication, California Inventory of Historic Resources (Sacramento: 1976). This inventory is incorporated by reference in this EIR. A more detailed description of the physical geography, natural resources (including maps and species lists), water quality problems and problem assessment is contained in the 1975 Water Quality Control Plan Report, San Francisco Bay Basin (Part 2, Chapters 11, 14 and 15). That report was prepared to comply with Section 303(e) of the Federal Water Pollution Control Act Amendments of 1972 requirements for a basin plan for water quality protection on a segment by segment analysis basis. The environmental setting aspects of the basin plan are pertinent to this planning effort as the boundaries of the planning areas are virtually the same, and Chapters 11, 14 and 15 of Part 2 of the Water Quality Plan Report, San Francisco Bay Basin are incorporated by reference in this EIR.

THE SOCIAL ENVIRONMENT

The social environment of the Bay Area encompasses the people--their homes, their schools, their work, their play--and the means of getting from one to the other. It encompasses the governmental structure by which the people, through their elected representatives, make decisions about growth and development in order to provide essential public services and protect the natural environment.

Central to growth management decisions is the amount and location of developable land. Preliminary figures from ABAG's recent survey of local development policies show that about 260 square miles of land in the Bay Area have been identified by local agencies as potentially developable within the next decade. This compares with about 1,300 square miles now urbanized. These developable lands are areas where local governments are committed to provide services for development and for which there are no environmental constraints because of local or regional policies concerning critical areas, critical resources or environmental hazards.

The People

The San Francisco Bay Area has a population of 4.9 million in 1977. More people live in the Bay Area than do in each of 36 states. The nine counties surrounding the San Francisco Bay cover roughly 6,980 square miles. About 1,300 square miles--roughly one fifth of the region's land--is now urbanized. Ethnic minorities are concentrated in a few communities. The highest percentages of racial and ethnic minorities live in the larger, older cities. Hispanic (or Spanish surname) people are the largest minority in the region, with 12.7% of the population. Nearly 8% are black, and 4.4% are Asian American. American Indian and other minorities comprise 1.3% of the population.

In the next two and a half decades, the region is expected to grow by between 500,000 and 1.2 million people. This would mean a total population of between 5.4 and 6.1 million in the year 2000, with an annual growth rate of 0.5 to 1%. Average household size in the region is declining, from 2.9 persons per household in 1970 to 2.65 persons per household in 1975 and will probably continue to decline.

School age children were 27% of the region's population in 1970, but in the newer, faster growing suburbs, more than 30% were of school age. Children 5 to 19 years old made up less than 20% in older urban centers that are completely built up and declining in population. Some older cities and suburbs are, in fact, closing schools.

Most persons aged 55 to 64 live in 1-and 2-person households and in larger cities. The highest percentages of people 65 and older are found in more dense, older cities, or in the scattered small communities of the north bay. Changes in the composition and distribution of the population call for local governmental decisions about new development so that areas that are growing rapidly can provide the jobs, public services and types of housing that match the age and household characteristics of people moving in.

Housing

ABAG's most recent estimate of housing needs indicates that 440,000 additional units will be needed by 1985--an annual average of 44,000. More than 180,000 of the region's 1.6 million housing units are either substandard or overcrowded or both. The regionwide figure of 11% inadequate housing masks the variation among counties, which ranges from 6.5% to 17.3%. The same patterns of growth that promote rehabilitating the existing housing stock, revitalizing older urban areas, and increasing the housing supply in rapidly growing suburban centers, where jobs supply is increasing, will also help attain air quality standards.

Personal Income

Income varies widely across communities. Upper income families live in small communities or neighborhoods in the foothills that rise from the bay plain. Most families with income below the poverty level live in flatland neighborhoods next to the bay--and in small towns and rural communities in the far northern parts of the region. Among the 93 cities of the Bay Area, median family income is as low as \$4,700 and as high as \$33,000, although, the lowest countywide figure is \$9,670 and the highest is \$13,900.

Jobs

In the bay region there are four Standard Metropolitan Statistical Areas (SMSAs): Alameda, Contra Costa, San Francisco, San Mateo and Marin are in the San Francisco-Oakland SMSA. Santa Clara County is in the San Jose SMSA; Sonoma County is in the Santa Rosa SMSA; and Napa and Solano Counties are in the Vallejo-Fairfield-Napa SMSA.

The Bay Area has a regional economy. Economic choices made in one part of the region have substantial effects in other parts of the region. In the next few years, Santa Clara, San Francisco, Alameda and Contra Costa Counties

are likely to be the job growth leaders in the region. Manufacturing; services; finance, insurance and real estate; and government are expected to be growth sectors in the region's economy. The agriculture and food processing sectors are expected to decline. Four-fifths of the land reserved by local governments for industry in the Bay Area is located in Santa Clara, Contra Costa, Alameda and Solano Counties.

The region's fastest growing basic industry--that is an industry serving markets outside the region--is high technology manufacturing. The high technology manufacturing industry in the Bay Area includes electronics, scientific instruments and space vehicles and is concentrated on the Peninsula and in Santa Clara County.

The San Francisco-Oakland SMSA is projected to receive the bulk of its employment growth in the finance and insurance sector, maintaining its share of nearly 90% of the region's jobs in this sector. However, despite this projected economic growth, unemployment will remain a problem. Unemployment rates are higher and have risen faster in older communities that are growing slowly or losing population. Since 1970, unemployment rates in the San Francisco-Oakland SMSA jumped 100%. When unemployment rates go up, local governments' revenues from retail sales and other sources decline. Instead of competing with expenditures for public assistance, programs to improve the natural environment can provide much-needed jobs.

Transportation

Bay Area residents find it easy to get around. They have 544 miles of freeways--roughly 10% of the State's total, thousands of miles of other streets, roads and highways, and reasonably good public transit--certainly better than in most parts of the State. The region has an estimated 3,100 transit vehicles--BART, cars, streetcars and buses--serving about 250 million riders a year.

Between 1960 and 1970, use of the automobile to and from work increased. There were approximately 1.8 million employed residents in 1970. Of this total 69% drove their cars to work, and another 9% were auto passengers. About 10% of the employed residents used transit, and the rest took taxis, other forms of transportation or walked. Between 1960 and 1970--in every county of the region--more people were finding work in counties outside the one they lived in.

Transportation--mostly moving people to and from work and carrying products--is the largest consumer of energy in the State, accounting for about 44% of energy demand. About 60% of all oil consumed in the State goes for transportation, and almost two-thirds of California's transportation energy is used on the highway.

Decisions on development patterns and mass transit that cut down the number of automobile trips to work not only conserve energy but reinforce housing and air quality objectives.

Governmental Complexity

The San Francisco Bay Area is one of the most governmentally complex of any of the nation's metropolitan areas. As of January 1, 1977, its 4.9 million residents lived in 9 counties, ranging in size from Santa Clara's 1.2 million to Napa's 92,700. An estimated 85% of the region's population lived in the Bay Area's 93 cities, ranging in size from San Francisco's 662,700 to Colma's 510. Forty-nine of the 93 cities have less than 25,000 residents. Together, those 49 cities have less than 10% of the region's total population, and only 11% of the population living in cities.

The region's cities and counties do not provide all local governmental services. Like the rest of California, the Bay Area has a large number of special districts. The region has 205 of the State's 1,122 school districts. More than 400 special districts in the region are concerned with a broad variety of functions ranging from neighborhood street lighting to large scale redevelopment to transit. Roughly one quarter (212) of the Bay Area's 825 special districts have environmental management responsibilities.

In urban centers, cities provide most municipal services--police and fire protection, construction and maintenance of streets, sewers, parks and recreation facilities; building inspection; and many other services and regulatory functions. But not all cities provide the same mix and level of services. What are basic or fundamental "city" services has never been determined. Counties provide many municipal services through special service areas. Independent special districts may provide still other municipal services. An important distinction between cities and counties is that counties--but not cities--are responsible for health and welfare services required by the Federal and State governments. However, development of social elements in general plans is beginning to appear on the agenda in a growing number of cities.

In addition to local agencies, there are a score of agencies with sub-regional (portions of 2 or more counties) and regional jurisdictions in the Bay Area. Some of these are service delivery agencies, others are planning agencies, and others perform regulatory functions. Some have combined functions. In addition to ABAG, these agencies include:

- Bay Area Air Pollution Control District
- The California Coastal Commission
- East Bay Municipal Utility District
- East Bay Regional Park District
- Emergency Medical Services Regions (2)
- Health Systems Agencies (3)
- Midpeninsula Open Space District
- Metropolitan Transportation Commission
- North Marin County Water District
- Regional Water Quality Control Board (4)
- San Francisco Bay Conservation and Development Commission
- Valley Community Services District
- Wastewater Solids Study Agency
- Yolo-Solano Air Pollution Control District

Fiscal Resources

Financing the Bay Area's governmental system takes money--lots of it. In fiscal year 1975-76, cities and counties in the Bay Area raised or received a total of \$2.6 billion in revenue to support local public services. Special districts (except for schools) in 1975-76 received \$928 million from enterprise activities such as sales of water and electricity, transit fares, and sewerage treatment charges, and \$205 million from non-enterprise activities.

City and county governments rely on revenues from 7 general sources: taxes, licenses and permits, fines and penalties, income from investment, revenues from other agencies, current service charges, and other revenue. More than one-third of all city and county revenues are derived from the property tax. The region's non-school special districts received nearly half of all non-enterprise revenues from the property tax.

There are significant differences in the revenue base of cities and counties in the Bay Area. The cities derive 28% of their total revenue from the property tax, including State property tax relief payments authorized by the Property Tax Relief Act of 1972 (SB 90). County governments depend on the property tax for more than 40% of their revenue.

Local sales taxes, an important source of revenues for cities, contributed almost 16% of total municipal revenue. Sales tax accounted for only 2% of total county revenue and 6% of San Francisco revenue.

Although revenue from other agencies (e.g., Federal grants, State subventions) is the largest single source of general purpose local government funds, the region's counties are much more dependent on this source than its cities. City governments receive less than 30% of their total revenue from other agencies, while 43% of counties' total revenue comes from this source. However, much of this difference is the result of partial State and Federal assumption of mandated county program costs such as welfare expenditures.

Revenues and assessed valuation per capita vary widely among counties and among cities within counties. Total revenues per capita in the eight counties other than San Francisco vary from \$218 to \$300. San Francisco's figure of \$753 per capita cannot be compared with the others because property tax revenues include both city and county tax levies.

In each of the eight counties some cities have per capita revenues that are far higher than those of the county and neighboring cities. In all cases these are cities with major industrial, commercial and high cost residential development.

Assessed valuation per capita in the counties ranges from \$2,777 to \$4,749. ABAG's local development policies survey shows that some areas do not have very much land that is--or can be--committed to new development. These jurisdictions can anticipate very little new development that might be a source of additional revenue.

IMPACTS OF THE WATER QUALITY MANAGEMENT PLAN

DESCRIPTION OF THE PROPOSED PROJECT

Twelve policies are proposed to improve water quality and meet applicable Federal and State standards and objectives. Each policy includes a series of actions to carry out the policies. A complete description of the recommendations appears in Chapter III of Volume I of the EMP and its Plan Recommendation tables. The twelve policies do not differ appreciably from those of the Draft EMP. Changes made include policy clarification, re-orienting of tasks and responsible agencies for implementation. None of the changes appreciably affect the significant environmental effects identified in the Draft EIR. The twelve policies recommended are:

- Policy 1 - Improve understanding of bay-delta estuarine system and the fate and effects of pollutants entering it
- Policy 2 - Establish continuing planning process for water quality management
- Policy 3 - Facilitate the re-establishment of recreational and commercial shellfish harvesting in the bay as allowed by water quality
- Policy 4 - Ensure that water pollution facilities or measures effectively protect water quality
- Policy 5 - Provide facilities needed for municipal sewerage service and water quality protection
- Policy 6 - Encourage consolidation of treatment facilities and discharge of wastewater to well-mixed receiving waters where economically justified and environmentally desirable
- Policy 7 - Accelerate programs toward reclamation and reuse of wastewaters
- Policy 8 - Establish a program of surface runoff controls that emphasize low cost measures to reduce the pollutant load
- Policy 9 - Provide facilities needed for industrial wastewater treatment and disposal and water quality protection
- Policy 10 - Reduce sewage pollution from vessels, including houseboats, in the bay-delta system.
- Policy 11 - Improve wastewater disposal practices in unsewered areas.
- Policy 12 - Monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in Bay Area.

THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The Plan Recommendation tables in Chapter III of Volume I of the EMP contain summary statements about the potential environmental, institutional/financial, economic and social impacts of the actions recommended to carry out the recommended policies for water quality management. Section G titled "Benefits and Costs of Plan Recommendations" in Chapter III summarizes the significant impacts.

As required by NEPA and CEQA, this discussion assesses the significant environmental effects of the Water Quality Management Plan. The significant environmental effects are:

- o improved water quality
- o fish, shellfish, flora and fauna, recreation and visual amenity benefits
- o increased production of sewage solids

For the purposes of the EIR, the policies of the Water Quality Management Plan are classified into two types of recommendations:

- o management planning recommendations
- o facility construction recommendations

The first type, management planning recommendations, includes research, monitoring, criteria and standard development, permit issuance, operation and maintenance activities, public education and information, and continuing integrated water quality management planning. Recommendations of this type are: Policy 1, Policy 2, Policy 3, Policy 4, Action 5.2, Policy 8, Action 9.2 and 9.4, Action 10.1, 10.2, 10.3 and 10.6, Policy 11 (all actions except 11.4) and Policy 12.

The significant environmental effects of these recommendations are improvements in water quality expected to result from improved information and its use in decision-making by agencies involved in protection of the quality of surface and groundwater supplies in the region. Indirect water quality benefits should also result from improvements in the efficiency and effectiveness of water quality management programs after consolidation and coordination of activities currently dispersed among a large number of agencies. Other significant environmental effects of management planning recommendations include: the benefits for other aspects of the natural/physical environment associated with the water quality benefits; and, increased knowledge about the environmental responses to pollutants. The affected aspects of the natural/physical environment encompass: fish, shellfish and other aquatic organisms, flora and fauna (species and habitats), recreation potential and use and visual amenities.

The second type of recommendation would ultimately result in construction of treatment facilities (e.g. municipal and industrial treatment facilities, marina pumpout facilities). Recommendations of this type are Action 5.1, Policy 6, Policy 7, Action 9.1 and 9.3, Action 10.4 and 10.5, and Action 11.4.

These recommendations will have significant environmental effects as they are carried out by local governments and the private sector. Federal and State standards and objectives govern the treatment levels and actions required prior to effluent discharge. Those requirements are based on protection of public health and the natural/physical environment. The major significant environmental effect is therefore the water quality improvements associated with implementing these recommendations. Improved water quality benefits other aspects of the natural/physical environment such as fish, shellfish and other aquatic organisms, flora and fauna (species and habitats), recreation potential and use, and visual amenities.

Another significant environmental effect is the production of sewage solids (sludge) associated with treatment of municipal and industrial wastes. Increased volumes of sludge will result from upgrading and expanding existing treatment facilities, providing new treatment facilities and reclamation activities.

Construction of treatment facilities has other tangible effects. Table 1 lists the EIR/EIS documents prepared (or in preparation) by EPA for the major wastewater management areas of the region. The 20-year Project List (Appendix J of Chapter III of Volume I of the EMP) includes many proposed facilities already discussed in those environmental documents. Proposed projects involve upgrading treatment levels, additions or expansions or reclamation studies at the existing facilities. The EIR/EIS documents listed discuss the environmental effects of construction of the sewerage treatment facility per se. The reader is referred to those environmental documents for the impacts of the construction of the sewerage treatment facilities recommended in the facilities plans prepared for those management areas. As the actions recommended are carried out by local governments and private industry and become site specific project proposals, those agencies will become Lead Agencies under the definitions of CEQA. As Federal grantees, they would be subject to NEPA requirements. The site specific environmental effects of the proposed projects would then be assessed as required by Federal and State laws.

The Water Quality Control Plan Report for San Francisco Bay Basin (Basin Plan) prepared in 1975 by the State Water Resources Control Board and the Regional Water Quality Control Board of the San Francisco Bay Region recommended a comprehensive water quality management plan for the San Francisco Bay Basin. Volume 2 of the Basin Plan contains an assessment of recommended facilities, control measures and alternatives. That information is incorporated by reference in this assessment effort. As the objectives of policies recommended for water quality management are premised on water quality standards and objectives, the recommendations of this plan build on and supplement the information and recommendations of the Basin Plan. As such, many of the environmental effects identified in the Basin Plan are pertinent to an understanding of the water quality effects of recommendations in the EMP.

The Construction Grants for Wastewater Treatment Works Program and the California Clean Water Grants Program fund construction of municipal wastewater

TABLE 1

ENVIRONMENTAL IMPACT STATEMENTS PREPARED BY THE
ENVIRONMENTAL PROTECTION AGENCY

Bay Area Sludge Study Project #1225 (pending)

Central Contra Costa County Wastewater Management Program, State 5B
Enlargements Water Pollution Control and Resource Recovery Facilities,
prepared with Central Contra Costa Sanitary District Draft Only
August, 1976, Project #1000

East Bay Dischargers Authority Water Quality Management Program Phase
I Project Draft December 1975 Final July, 1976 Project #0868

Eastern Contra Costa County Wastewater Management Plan Acute Impact
of Discharge at Alternative Outfall Location, prepared with East
Central Contra Costa County Agency Wastewater Management Agency, with
technical assistance, Arthur D. Little, Thomas Reid Draft April, 1976,
Final June, 1976, Project #10002

Eastern Marin-Southern Sonoma Wastewater Management Plan prepared
with Novato Sanitary District on behalf of Eastern Marin and Southern
Sonoma Wastewater Agencies with technical assistance by J.B. Gilbert
and Associates, November 1977, Project #1058

Livermore Amador Valley Wastewater Management Program prepared with
Livermore Amador Valley Water Management Agency, with technical assist-
ance by URS Research, Co., John Carollo Engineers, Draft January, 1976,
Final August 1976, Project #1031

San Francisco Wastewater Master Plan prepared with City and County of
San Francisco Draft February, 1974 Final May 1974, Project #0740

South Bay Dischargers Project #1135 (pending)

Western Contra Costa County Wastewater Management Program plus Amend-
ment to the final EIR/EIS West County Agency Wastewater Management
Program Wet Weather Flow Treatment and Regional Sludge Handling and
Plant Rehabilitation Draft, February, 1976 Final January, 1977
Project #1154

treatment facilities. Proposed projects that subsequently qualify for Federal funding move through a three step process. The Step 1 grant funds the preparation of a facilities plan. Federal regulations require all grantees to prepare an environmental assessment (in California an EIR may be prepared and U.S. Environmental Protection Agency would then prepare an EIR/EIS or Negative Declaration) as a part of the facilities planning process. Step 2 grants fund detailed design and specifications while Step 3 grants fund the actual facility construction. EPA files an EIR/EIS or Negative Declaration prior to award of a Step 3 grant.

ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS

Construction Effects

Construction of sewerage treatment facilities may have significant (adverse) environmental effects of a short-term, localized nature. These include the dust, surface runoff, noise and energy use related effects associated with construction activities. Other effects may include the alteration of land (and in some cases changes in land use) and visual impacts associated with providing new or expanded facilities. These effects can be minimized by noise and dust abatement measures, careful engineering design, and siting measures. The recommendations for surface runoff control measures at construction sites (Control Erosion) recommended in the county Surface runoff control plans would minimize any construction-related adverse effects of surface runoff.

Sewage Solids Generation

The major potentially significant (adverse) environmental effect of the sewerage treatment facilities listed in the Water Quality Management Plan (municipal and industrial) is the increase in sewage solids volumes. Upgrading primary treatment plants to secondary treatment results in a two-fold increase in the solids produced. Expansion of facility capacity and reclamation of wastewater also results in an increase in solids produced. It is estimated that by 1980 the wastewater treatment agencies in the region will generate about 2500 cubic yards per day of wet (80% moisture content) sludge cake. That amount would cover a football field about 2' high every day.

The sludge management system includes sludge process, transport and disposal or use. With the exception of thermal and combustion processes, the environmental effects of processing are not normally significant. The potential for significant environmental effects is associated with the transport and disposal/use components of the system.

The significant (adverse) environmental effects of those components of the sludge management system include: the potential for water quality impacts (e.g. surface runoff, groundwater contamination associated with landfilling and land application), air quality impacts (e.g. odor, transport truck emissions), and physical resource impacts (e.g. the effects on the supply

and use of land associated with landfill disposal and land application) and energy impacts (truck and pipeline transport).

The San Francisco Bay Region Wastewater Solids Study is developing a regional plan for long-term wastewater solids management and detailed facilities plans for the four largest wastewater treatment agencies (City and County of San Francisco, City of San Jose, Central Contra Costa Sanitary District and East Bay Municipal Utility District). This Regional Plan is a component of the solid waste recommendations of the Draft EMP.

The Draft Project Report/EIR/EIS for sludge management for the four major facilities will be written and processed in the summer of 1978. The potential adverse environmental impacts associated with the increased volumes of sewage solids resulting from wastewater treatment recommendations will therefore be mitigated as part of the sewage solids planning process. The facilities plans for the four largest wastewater treatment agencies will be based on the Regional Wastewater Solids Plan recommendations for sludge management, and will include an impact assessment of the site specific effects of sludge management activities at each of the facilities.

All other treatment facility expansions and reclamation studies will address the environmental effects of increases in sludge volumes in the facilities planning process. Sludge management proposals will have to be consistent with the EMP. Environmental documents will be prepared prior to grant awards for design and construction.

Secondary Impacts

Plans to construct sewerage treatment facilities often face opposition on the basis of their growth inducing characteristics and the adverse environmental impacts associated with the induced growth. The major environmental issue associated with induced growth is the deterioration of air quality. The facilities included on the 20-year Project List (Section J of Chapter III of Volume I of the EMP) and the actions recommended for on-site disposal management would accommodate growth planned for in the region. The 20-year Project List would provide needed facilities to accommodate a population of up to 6.1 million people in the year 2000 in a compact development pattern. The list was prepared using the Series 3 projections, high population estimates.⁴ The higher of the two projections can be accommodated by the projects shown on the list for the year 2000. The list is contained as Section J of Chapter III, Volume I. The project list will be updated annually. That will allow further examination of the need for facility expansions. It will also allow the incorporation of future growth trends into identification of needed facilities.

Originally, the compact development recommendations of the air quality plan were used to develop a project list. Future Federal and State financial assistance for construction of facilities will only be available to projects on the list. It was felt that compact growth would reduce the potential for deterioration of air quality resulting from induced growth.

The land use management portion of the AQMP was deleted from the EMP. The current 20-year Project List will accommodate the projected population of the region in the year 2000. The potential for a specific project to induce growth beyond that projected to occur in an area can only be assessed during the planning and assessment of each specific project. Adverse environmental effects of the accommodated development could be mitigated by actions of the affected local governments (e.g. zoning, capital improvements budgets) and by the actions of regional, State and Federal agencies responsible for meeting air and water quality standards and objectives.

The collection systems included on the 20-year Project List will require further assessment to determine their growth inducing potential and other impacts of providing central sewerage facilities in areas that are currently unsewered. Under current regulations,* sewage collection systems are only eligible for Federal assistance through the Construction Grants for Wastewater Treatment Works Program in "communities in existence" on October 18, 1972 and if there is sufficient existing or planned capacity to adequately treat such collected sewage and the bulk of the flow design capacity through the sewer system will be wastewaters originating from the community in existence on October 18, 1972.* Replacement or major rehabilitation of existing systems (based on a sewer system evaluation) "must be cost effective and result in a sewer system design capacity equivalent only to that of the existing system plus a reasonable amount for future growth." The collection systems will be subject to close scrutiny in the continuing environmental management planning process and annual' update of the 20-year Project List.

ALTERNATIVES TO THE PROPOSED ACTION

The No Action Alternative to the Water Quality Management Plan

The major alternative to the Water Quality Management Plan in its entirety is one of no action. The impacts identified in Plan Recommendation tables in Chapter III of the EMP were measured against that alternative. The no action alternative was not felt to be feasible for several reasons. Section 208 of the Federal Water Pollution Control Act Amendments of 1972 requires "gubernatorial designation of areas with substantial water quality problems and a single representative organization capable of developing effective areawide waste treatment management plans for such area"** and within "a year of designation that a continuing area-wide waste treatment management planning process consistent with Section 201 of the Act"*** be in operation. As the designated organization for the San Francisco Bay Region, ABAG is obligated to establish a process and "produce an areawide waste treatment management plan not later than two years after the planning process is in operation"****

*Section 35.92513 Final Construction Grants Regulations 40CFR, Part 35, Subpart E.

**Section 208 (a) (2)

***Section 208 (b) (1)

****Section 208 (b) (1)

The No Action Alternative for Municipal Facilities and Industrial Discharges

The Basin Plan referenced earlier and facilities plans prepared for subareas of the region and individual treatment works have addressed, for the most part, only point sources of pollution and generally municipal facilities. Section 208 (b) (A)-(D) requires the areawide waste treatment management plan to identify "treatment works necessary to meet anticipated municipal and industrial waste treatment needs of the area over a twenty-year period." The no action alternative to the municipal and industrial waste treatment management recommendations (Policy 5 and Policy 9) is not feasible on two counts. First, such recommendations are required by law. Existing municipal and industrial discharges must meet applicable water quality standards through treatment levels for effluent discharge required by the National Pollutant Discharge Elimination System permits issued by the Regional Water Quality Control Board. Second, facility recommendations for the twenty-year planning period are also required by the Act. No action would not provide for growth and would result in violations of water quality standards by existing point sources as their capacities are exceeded.

The No Action Alternative for Miscellaneous Sources

Designation of an area as having substantial water quality problems is generally based on a situation where waters in the area would not meet applicable water quality standards even with high levels of treatment of wastes at point sources of pollution. This situation generally results from pollutants entering those waters from non-point sources of pollution (e.g. Vessel wastes, surface runoff).

The Basin Plan discussed several non-point sources of pollution that contributed to designation of the Bay Area as an area with substantial water quality problems. Those included urban runoff, construction related runoff, agricultural runoff, salt intrusion and control, oil spills, dredged spoil, solid waste disposal and floating debris. The Basin Plan discussed general approaches to manage these sources of pollutant loadings to the Bay system.

Section C ("Water Pollution Problems and Their Causes") of Chapter III in Volume I of the EMP describes the nature and seriousness of existing and future water quality problems in the San Francisco Bay system. Included in that description are miscellaneous sources of pollution (non-point sources). The major sources (surface runoff, vessel wastes, on-site disposal systems and oil and chemical spills are addressed by recommended management actions (Policy 8, Policy 10, 11 and 12 respectively). The no action alternatives to non-point source recommendations is not feasible. Section 208 (b) (2) (F)-(K) requires these sources to be addressed. No action with respect to these miscellaneous sources would result in the worsening of water quality problems associated with such sources. This EMP goes beyond the Basin Plan and recommends specific actions to manage non-point sources of pollution.

Institutional Alternatives to Implement the Water Quality Management Plan

An alternative that could have been recommended throughout the Water Quality Management Plan was the creation of new agencies or a "super" regulatory agency to implement the recommended actions. Section 208 (c) (2) (A) requires that there be adequate authority "to carry out appropriate portions of an areawide waste treatment management plan..." The regulatory program developed must indicate that agency(s) with regulatory responsibility possess the statutory authority, or have initiated legislative proposals to obtain the authority to carry out the activity and use the forms of regulation called for in the plan (Section 208 (b) (2) (C)). Thus, the option was feasible.

The EMTF Plan Implementation Committee directed ABAG staff with regard to institutional arrangements for plan implementation. Chapter VIII of Volume I of the EMP describes the "guiding principles" developed by that committee. The committee (and EMTF endorsement for the draft plan) indicated that successful initial implementation of the plan required the use of existing agencies with implementing authorities where those agencies could reasonably be presumed able to effectively implement proposed actions. The implementing authorities for plan recommendations are distributed among many agencies in the region. Past efforts have shown that cooperative agreements (e.g. Joint Powers Authorities, Memoranda of Understanding) are effective means of implementation. Those guiding principles ruled out changes in institutional structures such as creation of new agencies or a "super" regulatory agency.

In addition to the no action alternative to the Water Quality Management Plan in its entirety and to the three elements (municipal facilities, miscellaneous sources and industrial discharges) discussed, alternatives to specific policies and actions were also considered.

Alternatives to Policy 1

One alternative considered for Policy 1 (Improve understanding of Bay-Delta estuarine system and the fate and effects of pollutants entering it) and its implementing actions was no action or continuation of the status quo. Numerous agencies (Regional Water Quality Control Board, State and County Health Departments, Federal agencies, local agencies, special districts, private industry) currently conduct research and monitoring programs. However, due to limited resources, the programs are not as extensive as would be desirable. One major problem associated with the current data gathering effort is that of information transfer. The data that does exist is not well circulated or easily accessible in a uniform format. Because much of the research data is inconclusive or of questionable value and several of the water quality management recommendations call for new monitoring and research, the no action alternative did not seem feasible. An independent, centralized research and monitoring program was recommended to obviate long delays in assembling an adequate data base for ongoing water quality management planning and to improve the reliability and accessibility of the data generated. Action by the EMTF and Executive Board changed the context in which research and monitoring would proceed and some responsible agency designations. Rather than an independent, centralized program, an Advisory Council with broad membership is proposed. The impacts/significant environmental effects, however, remain the same.

Alternatives to Policy 2

The no action alternative for Policy 2 (Establish a continuing planning process for water quality management) is not feasible. Section 208 (b) (1) and (3) requires the establishment of such a process and annual updating of the areawide waste treatment management plan.

Alternatives to Policy 3

The alternative considered for Policy 3 (Facilitate re-establishment of recreational and commercial shellfish harvesting in the bay as allowed by water quality) was no action or continuation of the status quo. Beds of mussels, oysters and clams are widespread in the bay system. However, they remain an untapped resource due in large part to the presence of pathogenic bacteria and viruses in overlying waters. Continuation of the status quo would not change the current situation. The shellfish resource would remain untapped and inaccessible to the Bay Area population. As the discharge of substances that contaminate shellfish are prevented or reduced, the potential to realize the benefits of the resource is greatly improved. No action does not appear reasonable in light of the actions and investments taken to improve water quality. There are no viable alternative approaches to re-establishing shellfish harvesting. Beds closed to recreational and commercial harvesting are closed due to the potential health hazards of harvesting contaminated shellfish. Before the beds could be open to recreational harvesting, surveys by the State Department of Health would be mandatory. Commercial harvesting requires better information on the effectiveness of depuration and relaying as methods of ridding shellfish of contaminants. The State Health Department is the agency with expertise and authority to initiate necessary actions (in conjunction with the Regional Water Quality Control Board, State Department of Fish and the County Health Departments).

Alternatives to Policy 4

The alternative to Policy 4 (Ensure that water pollution facilities or measures effectively protect water quality) was no action or continuation of the status quo. The municipal and industrial treatment facilities construction program has involved substantial amounts of capital investment. As the program of construction tapers off, it will be necessary to concentrate efforts on the operational aspects of those facilities. The monitoring effort and annual report would provide data on aspects of plant operation needing attention. Billions of dollars of capital investment will be poorly spent if plants are not properly operated. The no action alternative would not ensure that capital investments in facility construction would return the water quality benefits expected from the construction.

Alternatives to Policy 5, 6 and Policy 9

An alternative considered for Policy 5 (Provide facilities needed for municipal sewerage services and water quality protection), Policy 6 (Encourage consolidation of treatment facilities and discharge of wastewater to well-mixed receiving waters where economically feasible and environmentally desirable), and Policy 9 (Provide facilities needed for industrial wastewater

treatment and disposal and water quality protection) was to require toxicant removal prior to discharge of effluents to municipal systems or directly to the bay system. The effects of substances such as toxicants can upset treatment process operation and damage aquatic life in the receiving waters. Detection and source control of toxic materials discharged to subregional sewer systems is a difficult and expensive problem. Reduction of toxicant emissions at the source requires the cooperation of industrial operators with processes or control procedures that may contribute these substances to the sewer system or receiving waters. Local and subregional waste ordinances and National Pollutant Discharge Elimination System (NPDES) permits currently require that certain actions be taken to treat toxic substances prior to discharge. Removal of toxic substances from waste discharges (and storm runoff) is difficult and expensive. Despite data from fish bioassay, effluent chemical analysis, and receiving water and bay monitoring, conclusive evidence is lacking regarding the harm of such discharges to the biological system of the bay. In light of this situation, it was not judged feasible to recommend toxicant removal at all treatment facilities. Instead, it is recommended that the current efforts continue and a reduction in the discharge of toxic substances be accomplished where this can be done easily and relatively inexpensively. At the same time, research would be undertaken to determine whether harmful effects are occurring and if further removals are justified.

Alternatives to Policy 7

Alternatives to Wastewater Reclamation and Reuse are described as part of the Water Supply Management Plan alternatives.

Alternatives to Policy 8

The alternatives to the surface runoff management recommendations (Policy 8 - Establish a program of surface runoff controls that emphasize low cost measures to reduce the pollutant load from this source) were considered by each of the counties in the process of developing the individual County Surface Runoff Control Plans. The criteria used to eliminate alternatives or control measures is described in some detail in each county plan. The County Surface Runoff Control Plans are contained in Appendix C of the EMP. Generally speaking, the alternative to an emphasis on low cost measures for reducing the pollutant load from surface runoff would have been to recommend new programs or structural approaches. Alternatives of that nature were rejected for the most part because the concept of Best Management Practice stressed by EPA involves an initial focus on better housekeeping methods and a reorientation of current programs to include water quality benefits as an additional criteria. The effectiveness of this approach will be studied and specific demonstration projects carried out to gather further information about the effectiveness of controls. Alternative approaches will be investigated in the continuing planning process.

Alternatives Policy 10

Several alternatives were considered for the vessel waste management recommendations (Policy 10 - Reduce sewage pollution from vessels, including

houseboats, in the bay-delta system). An alternative considered for Action 10.1 (Improve monitoring and documentation of vessel waste pollution) was to have responsibility for monitoring rest with marina owners who would report results to the Regional Water Quality Control Board (RWQCB). That alternative, upon further investigation, was judged not feasible. The authority that would have been used was the RWQCB waste discharge permit authority. However, legally and technically the marina is not the point of discharge. The boats in the marina are the discharge "points". The original recommendation was for the independent research and monitoring program to conduct the monitoring. After changes in Policy 1, this action was also changed so that the Regional Water Quality Control Board and County Health Departments will be responsible for periodic sampling and documentation of the effectiveness of current vessel waste pollution control programs. These activities are important to Policy 3 so that progress can be made in reopening shellfish beds for recreational and commercial harvesting.

An alternative to Action 10.2 (Conduct public hearing(s) and establish discharge prohibition as appropriate) would have been to recommend that the entire bay be declared a no discharge zone. Large portions of the bay are not as sensitive to waste discharges as specific beneficial use areas such as shellfish beds and water contact recreation areas. Pending analysis of the water quality effects of new no discharge zones in the recommended areas, it did not seem reasonable to require potentially unnecessary and extremely costly actions by point source dischargers to eliminate all discharges to the bay. Results of Action 10.1 will be used to determine discharge prohibition needs in environmentally sensitive areas.

An alternative to Action 10.3 (Inform boating public of marine sanitation device program) was to recommend a Bay Area specific marine sanitation device program. That program, as initially conceived, would have involved requiring all boats to install Bay Area approved marine sanitation devices (MSD). Operated through an inspection program administered by the Department of Motor Vehicles, DMV would require the boat owner to show a certificate from an inspection station that there was an approved MSD on the boat. This would occur as part of the boat registration/license program. The inspection station options were boat dealerships, repair shops, marinas or county health departments. Licensing of the inspection station and identifying Bay Area approved MSD would be handled by the State Health Department through the county health departments. Authority to regulate MSD would be delegated by the U.S. Coast Guard. Analysis of the legality of such a program indicated that the State would be pre-empted from undertaking such a program because the statutory authority to regulate rests with the Federal government (U.S. Coast Guard). Further analysis of the institutional complexities of such an approach also influenced the decision not to pursue that alternative. Instead, a public education program by the Regional Water Quality Control Board and U.S. Coast Guard is recommended as an effective way to inform the boating public about required devices and the importance of controlling vessel discharges.

Action 10.4 and 10.5 support current requirements for marinas and harbors.

Alternatives to Policy 11

The major alternative considered for Policy 11 (Improve wastewater disposal practices in unsewered areas) was that of no action or continuing the status quo. Because problems associated with failing septic tanks occur throughout the Bay Area under the existing system, continuation of the status quo or no action was not felt to be feasible if the problem is to be alleviated.

An alternative to Action 11.1 (Establish minimum regionwide standards for on-site disposal systems) would have been to recommend that the Regional Water Quality Control Board set standards and impose those standards on the county health departments. The county health departments currently permit on-site disposal systems. The problem appeared to rest with lack of uniform standards and application of standards. A cooperative approach to standard setting appeared to be the more effective alternative.

No action did not appear to be a feasible alternative to Action 11.2 (Inspect periodically new on-site wastewater disposal systems, including septic tanks, and establish procedures to ensure proper maintenance.) Historically many system failures have been linked to poor maintenance, due to the discretion allowed homeowners and their lack of information about the consequences of poor maintenance. A public oversight role appeared to be an appropriate solution. An alternative would have been to recommend the creation of a new agency to implement public management of new on-site systems. Based on the EMTF approach not to recommend the creation of new agencies where current implementing authorities exist and can reasonably be assumed able to carry out the recommended action, that alternative was rejected.

The same reasoning applies to the recommended implementing agencies for Action 11.3 (Establish procedure for inspection and maintenance of existing on-site systems where appropriate). Another alternative for that action would have been to require public management of existing on-site systems. Since failures are not always the result of poor maintenance (but may instead be due to improper soil conditions, etc.), requiring public management may be inappropriate in many areas as it would not solve those problems. Instead a procedure to inspect and maintain systems where that is appropriate to current problems is recommended. Requiring public management of existing systems when the problem is that the systems are not technically appropriate would allow the health hazards of recurrent failures to continue instead of encouraging the area to plan for a central sewerage system as recommended in Action 11.4 (Where on-site systems are inappropriate, install sewerage system).

Alternatives to Policy 12

The alternative considered for Policy 12 (Monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in Bay Area) was no action or continuation of the status quo. Numerous agencies are currently involved in dealing with spills (Coast Guard, Department of Fish and Game, EPA, RWQCB, State and County Offices of Emergency Services, Fire Department and local contractors). Testimony on the Draft EMP indicated

that petroleum spills in bay and offshore waters are currently adequately handled by existing arrangements. Non-petroleum hazardous chemical spills merit study and a task force to do so is recommended. Effectiveness of inland hazardous/toxic chemicals spill prevention and clean-up arrangements will be developed. These aspects of spill prevention and clean-up merit attention so that some action was indicated.

Regulation of the construction and operation of vessels, facilities and safety device installation and increased liability limits would effectively reduce the risk of accidental oil and chemical spills. Such actions would provide incentives to shippers and facility owners to install effective safety devices and provide operator training to counter spills resulting from operator error. These actions appeared more feasible than the status quo or the risk of spills. Federal law preempts State or regional vessel construction and operation regulations and thus the recommendation (Action 12.6) supports Federal efforts.

No action did not appear feasible with regard to the current shipping traffic situation in North San Pablo Bay and Carquinez Straits. Shipping traffic in those areas is substantial. The risk of accidents remains due to the lack of a traffic system. Investigation of extending the comprehensive Central Bay radar traffic system seems advisable.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The recommendations of the Water Quality Management Plan are an attempt to initiate a program of actions to be taken by all levels of government and the private sector that would result in the maintenance and enhancement of long-term productivity of the region's water resources. In some cases, for example, the municipal, industrial and certain of the miscellaneous source management actions would result in the short-term use of available materials to achieve long-term productivity. Taking action now will promote the long-term maintenance and enhancement of the beneficial use potential of the region's streams, lakes and reservoirs and the bay (e.g. water contact and non-contact recreation, fishing, shellfishing, etc.). This may only postpone the time when even more stringent pollution control programs to protect the region's water resources will be required. On the other hand, actions taken now may negate or substantially reduce further actions at some point in the future.

ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Policies which would ultimately result in construction (Action 5.1, Action 9.1 and 9.3, Action 10.4, 10.5, Action 11.4) of treatment facilities would require material and land resources. The land where the facilities will be sited may undergo irreversible environmental changes. The specific sites where that will occur and the exact nature of the irreversible environmental change from construction of the project and due to any growth accommodated by the project will be identified during the planning and assessment for the specific project.

THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS

The recommendations in the plan most susceptible to scrutiny for their growth inducing potential are the municipal facilities policy (Policy 5) and actions and the on-site disposal system management policy (Policy 11) and actions. Comments received on the October draft of the Water Quality Management Plan raised concerns that any recommendation for public management of new on-site disposal systems would be construed as a growth inducing action and would adversely affect local government efforts to control growth on lands outside urban service areas.

As a result of those comments, the policy was modified. It was further modified to reflect deletion of land use controls. The new policy, Policy 11, reads "Improve Wastewater Disposal Practices in Unsewered Areas." The actions recommended to carry out that policy seek to do several things. First, uniform standards and criteria would be developed. That would ensure that new on-site disposal systems (especially septic tanks) would only be permitted where it could be demonstrated that they are technically feasible and could be presumed to function effectively, with proper maintenance, without degradation of the ground or surface water. Use of uniform standards, criteria and tests by each county health department would eliminate the current situation where, because of different criteria, permits may be issued in one county under circumstances that would result in denial in another county. Assuming that new, uniform standards and criteria would be more stringent than many current ones, rather than inducing development, the effect could be the opposite. Development proposals would still have to pass the test of consistency with local development policies. Inspection and maintenance requirements for new on-site disposal systems merely ensures that if on-site systems are permitted because they are technically appropriate, and are consistent with local development policies, they would not fail due to lack of proper maintenance. It is therefore felt that Policy 11 should not have growth inducing effects.

Policy 5 (Provide facilities needed for municipal sewerage services and water quality protection) and the actions to carry out the policy as embodied on the 20-Year Project List (Appendix J of Chapter III of Volume I of the EMP) are also subject to scrutiny for their growth inducing effects. The projects on the list that involve expansion of existing treatment facilities are those facilities necessary to serve a Bay Area population of 6.1 million people in the year 2000. Because of the uncertainties about future population levels, projections of future waste loads were also calculated based on the low population projection of 5.4 million people in the year 2000. The projects on the list that would have their timing affected are noted with two asterisks. The projects on the 20-Year Project List reflect expansions, additions and new facilities currently determined to be necessary over the next twenty-two years to accommodate the anticipated growth in the region. The Series 3 population projections will be used by Federal and State grant authorities to fund facilities construction. If the region grows as projected, its sewerage needs should be provided for in an orderly fashion without any artificial constraints on or inducements to growth. Each project on the list will be subject to Federal and State grant regulations and NEPA and CEQA requirements (including a discussion of the project's growth inducing potential) prior to funding consideration.

As discussed in the section "Significant Environmental Effects Which Cannot Be Avoided if the Proposal is Implemented," the collection sewer systems included in the 20-year project list must be assessed for their growth inducing potential. At this point, it is possible that certain of those systems could induce growth (although the ultimate limiting factor is the capacity of the treatment plant at the end of the pipe--a capacity selected to correspond to projected population). However, during the initial phases of the continuing environmental management planning process, those projects will be re-evaluated. In revising the 20-year project list (an annual activity required by Section 208 of the Federal Water Pollution Control Act Amendments), those projects found not to be consistent with the EMP would be deleted from the list. Moreover, prior to construction with Federal and State grant assistance, those projects judged eligible will have to meet Federal and State regulations and NEPA and CEQA requirements (including a discussion of the project's growth inducing potential).

IMPACTS OF THE WATER SUPPLY MANAGEMENT PLAN

DESCRIPTION OF THE PROPOSED PROJECT

Three policies are proposed to improve water supply management activities in the region. Each policy includes a series of actions to carry out the objectives of the policy. A complete description of the recommendations appears in Chapter IV of Volume I of the EMP and its Plan Recommendation tables. Few changes were made to the original policies and actions. The clarification of policy intent, re-orienting of tasks and changes in responsible agencies that occurred do not appreciably affect the significant environmental effects noted in the Draft EIR. The three policies recommended are:

Policy 1 - Provide a safe and reliable water supply to all citizens at a minimum monetary and environmental cost

Policy 2 - Encourage water saving

Policy 3 - Encourage safe and cost-effective wastewater reclamation.

The water supply management plan represents a step toward optimal use of the water supplies available to the Bay Area. While this initial analysis indicates that efficient use of current supplies would minimize the necessity to build expensive and environmentally costly new sources, the alternative methods of ensuring optimal use require further assessment before tradeoffs among the alternatives can be fully considered in the decision-making process. This plan therefore establishes a mechanism for considering the options possible for a cooperative approach to water supply management in the region.

SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The Plan Recommendation tables in Chapter IV of Volume I of the EMP contain summary statements about the potential environmental, institutional/financial, economic and social impacts of the actions recommended to carry out the three policies for water supply management. Section G titled "Benefits and Costs of Plan Recommendations" in Chapter IV summarizes the significant impacts.

As required by NEPA and CEQA, this discussion assesses the significant environmental effects of the Water Supply Management Plan. The significant environmental effects are:

- o management and protection of existing surface and groundwater supplies
- o beneficial impacts of water conservation and wastewater reclamation on the natural/physical environment.

For the purposes of the EIR, the actions to implement the policies are divided into three types of recommendations:

- o management planning recommendations
- o administrative actions and incentives for water savings
- o supply development and distribution

The first type of action, management planning, includes coordination activities, research, public education, special studies and continuing integrated water supply management planning activities. Actions of this type are Actions 1.1, 2.4, 2.6, 3.1 and 3.3. The expected benefits of such recommendations include an improved information base for water supply agencies operating in the Bay Area and development of coordinated and consistent data.

Currently, the interaction among those agencies is minimal and sporadic. The drought of the last two years has highlighted the need for coordination and cooperation and the importance of a regional perspective for planning for water supply and use in the years to come. The benefits of planning together for the region's future water needs include the improved reliability and flexibility of the current and future water supply system and operation of that system, the enhanced ability of agencies to ensure the selection of cost-effective, environmentally sound methods of supply, water conservation and reuse, managing and protection of existing surface water supplies, a workable plan for dealing with future drought conditions, and a comprehensive approach to protection and use of the region's groundwater resources.

Another type of recommendation involves actions to affect water savings. Actions of this type include Actions 2.1, 2.2, 2.3, 2.5, 2.6, 2.7, 2.8 and 2.9. They involve administrative actions such as code enforcement, revision of water-rate structures and other incentives to ensure implementation of residential, commercial, industrial and agricultural water conservation practices. The expected benefits of these recommendations include the efficient use of existing water supplies, energy savings for various sectors from reduced water use, and the potential to forego costly and environmentally damaging major water supply projects.

Water savings would also result from the reuse of wastewater. Use of reclaimed wastewater for purposes such as industrial cooling, certain crop and forage production and landscaping would result in higher quality water supplies being available to serve more demanding purposes such as potable water supply. Use of reclaimed wastewater for irrigation purposes in parks, golf courses, highway rights-of-way, and agricultural and silviculture would have aesthetic as well as recreational benefits for the region. In addition, reclaimed wastewater may be used for purposes such as marsh enhancement, with resultant benefits for the biological community supported in and by those natural areas.

The third type of recommendation involves supply development and distribution and construction of wastewater reclamation facilities. Actions of this type include Actions 1.1 (a) and (c) and 3.2. The significant environmental effects of these actions are the environmental effects associated with construction and operation. Supply development and distribution involves dams and reservoirs, aqueducts and associated appurtenances to capture, store and convey water to areas close to population centers for treatment and distribution to the ultimate consumers. There are significant environmental effects associated with each step of supply provision. Environmental effects shared by all of the steps in supply development and distribution include construction impacts such as dust, noise, energy use, land disruption and surface runoff and other water quality effects. A major concern with water supply reservoirs (source or storage) is the alteration of the natural state of the environment-- changing free flowing streams to flat water environments. Alterations to the

natural stream character may also result from construction of the conveyance system as channelization and re-routing of streams is often necessary. Water quality effects may accompany those alterations. The energy required to transport water long distances is another shared significant effect of several steps in supply provision.

Interagency water transfers would generally involve interties between the supply distribution systems of water supply entities. The most notable example is the pipeline across the Richmond-San Rafael bridge, which, during the drought, supplied Metropolitan Water District of Los Angeles water to Marin County residents via the East Bay Municipal Utility District's system. Interties similar to that would not have significant environmental effects. Many other interties currently exist or could be affected by minor connection projects. Further major interties may have significant environmental effects associated with their construction. However, at the time that such additional interties are proposed, the implementing water supply agency would be the Lead Agency under the definitions of CEQA and would be responsible for the preparation of a Draft EIR or Negative Declaration. The major significant environmental effect of a system of interties is the potential to forego the development of possibly environmentally damaging major new supplies. That potential is enhanced by an ability to use contingency capacities of all existing water supplies through the system of interties instead of development of independent contingency capacities.

ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS

The major significant (adverse) environmental effects associated with water supply provision are those associated with the construction of dams.

The adverse effects include:

- o Loss of natural setting and transformation of scenic values
- o Loss of resource value of lands:
 - wildlife habitats and species (diversity, composition, and quantity)
 - agricultural lands
 - forested lands
 - mineral resources
 - recreational opportunity changes
 - sites of historic, cultural and archaeological significance
- o Displacement and/or disruption of resident population and service area population changes
 - changes in development patterns
 - changes in area economic activity
 - changes in composition of population and community character

o Loss and disruption of free flowing stream environment

- changes in downstream hydrologic and sediment conditions (water quality effects and flooding effects)
- potential for downstream erosion and beach erosion due to disruption of littoral transport
- loss of stream fisheries
- destruction of plant communities by inundation and changes in downstream riparian community

Many of the same adverse effects are associated with the other components of the supply system (e.g., aqueducts, storage facilities).

The Water Supply Management Plan does not recommend the construction of specific projects and thus site-specific effects cannot be identified at this point. The environmental impacts of separate system interties and other specific alternatives for supply management would be identified during the continuing planning process and by the implementing agencies that would carry out plan recommendations.

Several of the major water supply projects discussed in the plan have had Environmental Impact Statements prepared for them. These include the Warm Springs Dam in Sonoma County and the San Felipe Division of the Central Valley Project. They also include several dams along the American River. An Environmental Impact Report was also prepared for the local aspects of the San Felipe Project. Those water supply facility proposals still in the planning stage would have EIRs prepared as specific alternatives are identified. These projects include the EBMUD aqueduct from an American River storage facility, another conveyance project of the San Francisco Hetch Hetchy Dam (also commonly known as the fourth barrel of Hetch Hetchy), and the North Bay Aqueduct. The impacts that have been documented are public record. Mitigation measures are also identified.

One important outcome of water savings and reuse of reclaimed wastewater would be the ability to re-examine the need for costly and environmentally damaging projects. When placed in the context of information on conservation and reuse, the tradeoffs would be better understood and the ability to choose optimal solutions to future water supply needs would be improved.

Wastewater reclamation facilities will be assessed for their cost-effectiveness and environmental impacts during the facilities planning phase of the Construction Grants Program for Wastewater Treatment Facilities (Section 201 of the Federal Water Pollution Control Act and the California Clean Water Grants Program). The wastewater treatment agency (special districts, cities and counties) would then become a Lead Agency under the definitions of CEQA and subject to NEPA requirements as a Federal grantee. At that point, the agency would prepare an assessment of significant environmental effects as required by Federal and State laws.

A potential significant (adverse) environmental effect of wastewater reclamation is associated with the possibility that the reclaimed wastewater may

contain bacteria, viruses or other substances harmful to public health. Use of reclaimed wastewater is restricted by State Health Department regulations to uses that do not involve human ingestion (e.g. landscape irrigation, industrial cooling and some agricultural production). Reclaimed wastewater could be used for groundwater recharge where groundwater is not used for a drinking water supply. Other uses include marsh enhancement and the creation of artificial lakes. Controlling the use of reclaimed water and thorough research and monitoring would minimize the potential for significant (adverse) environmental effects and health effects.

Another significant (adverse) environmental effect of wastewater reclamation is the amount of sludge created in the treatment process. Those effects are mitigated by the Regional Wastewater Solids Study (Policy 15 of the Solid Waste Management Plan) that recommends a plan for managing the sewage solids created by the region's wastewater treatment facilities. The Regional Wastewater Reclamation Study will also address the benefits and adverse effects of a large-scale reclamation effort in the Bay Area.

The other significant (adverse) environmental effects of the water supply management plan are the construction-related impacts outlined earlier--dust, noise, energy use and surface runoff. Those impacts can be mitigated by noise and dust abatement measures, careful engineering design and siting measures, and by the implementing actions recommended in the Water Quality Management Plan for surface runoff control, particularly erosion controls recommended in County Surface Runoff Control Plans.

ALTERNATIVES TO THE PROPOSED ACTION

The major alternative to the Water Supply Management Plan in its entirety is one of no action. The impacts identified in the Plan Recommendation tables of Chapter IV were measured against that alternative. No action was not felt to be a reasonable alternative.

Developing an integrated environmental management plan requires consideration of air, water and solid waste management. Actions recommended for air quality management will have impacts on water quality, solid waste and water supply. The same is true for solid waste management. Water conservation could reduce the flow of wastewater and affect the design of wastewater treatment facilities. It could also affect projections of future water use. Wastewater reclamation and reuse for groundwater recharge and other purposes affects water quality management decisions and is a logical extension of improving municipal treatment works. Changes in conservation and reuse practices, as well as gaps in drought and groundwater planning, demonstrate the need for regional cooperation in water supply planning.

Institutional Alternatives to Implement the Water Supply Management Plan

An alternative to Action 1.1, which recommends the creation of a Water Management Coordinating Council composed of existing water supply authorities in the region, would have been to recommend a metropolitan water agency. The new agency could be responsible for all aspects of water supply from planning to service delivery. Although an agency of this type would probably be an efficient arrangement, its creation would obviously involve drastic institutional changes that would be extremely controversial and difficult to

accomplish. The approach chosen appeared more promising. Most of the advantages of regional water supply planning can be obtained if cooperation between existing agencies can be improved. Development of a mechanism for cooperative interagency water supply planning could lead to more efficient water use without the necessity for major institutional change. A general policy governing plan development was that no new or "super" agency would be suggested where an existing agency(s) had the appropriate authority and could reasonably be assumed capable of effectively implementing recommended actions. This policy is discussed in Chapter VIII of Volume I of the EMP. The EMTF Plan Implementation Committee directed staff in these matters. Thus, although 83 separate agencies currently distribute water from 8 different sources and operate independently with the potential in-efficiencies inherent in such an approach, a metropolitan water agency was not recommended.

Alternatives to Water Savings

Alternatives to the water conservation actions considered the no action alternative in addition to other alternatives. The no action alternative was not considered feasible for several reasons. The recent drought forced an awareness of the finite nature of water availability. Conservation programs have shown dramatic results in reducing water consumption. Other events of the recent past have also contributed to changing values about resources, consumption patterns and the interactions of the social, economic and physical environment. As a result, there is every reason to consider water conservation a viable objective even though the drought ended.

As discussed in Chapter IV of Volume I of the EMP, the potential savings of moderate and maximum programs of water conservation were analyzed during plan development. The experience of water conservation programs implemented in the Bay Area and elsewhere and the large number of existing dwelling units in the region influenced the decision to recommend a simple, moderate residential conservation program. For existing structures the program relies heavily on occupant installation of devices and a simple means of seeking voluntary cooperation and compliance. The maximum program, in this case, is feasible and viable as it differs only in the effort expended to get the conservation/water savings kits to the consumer. Estimated savings could be from 1.7 gallons per capita per day (assuming 30% use of displacement bottles and 15% use of shower inserts under the moderate program) to 4.1 gpcd (assuming 75% use of bottles and 35% for shower heads under the maximum program.)⁵

A moderate water conservation program for new residential construction could be accommodated as part of initial construction with relative ease. Other devices such as shower flow controls, faucet flow controls, hot water pipe insulation, shower cut-off valves, and pressure regulators to name a few viable options would save considerable amounts of water from in-home water use at low per unit costs of considerably less than \$100. Many alternatives are possible for commercial establishments, industries and public agencies including those mentioned for residential programs. The water savings potential is substantial and the most cost-effective alternative program would be developed for such large volume users on a case by case basis.

Agricultural water conservation presented the opportunity for consideration of several alternatives such as pressurized irrigation systems, leveling of land, and low application rate techniques as well as subalternatives within those alternatives (e.g. portable and semi-portable sprinkler systems, drip irrigation, automated systems). Conservation could also be achieved by night irrigation, alternate middle irrigation, improvements to the distribution systems and reducing water losses. The differences in controlling factors (e.g. terrain, soil type, crops) requires a county by county analysis to determine the "best" alternative.

Residential (existing and new), commercial, industrial, public agency and agricultural measures such as those mentioned were packaged into eight alternative comprehensive conservation programs. Those alternatives appear in detail in an appendix which will be available for public inspection. The two most promising programs were labeled moderate (Plan A) and maximum (Plan B) and are summarized in Chapter IV of Volume I of the EMP. Again, for the initial phase of implementation, the moderate plan is recommended for implementation.

Alternatives to Wastewater Reclamation and Reuse

The alternatives for wastewater reclamation and reuse (Policy 3) are no action and alternative uses of reclaimed wastewater namely landscape irrigation, agricultural irrigation and industrial use for cooling purposes. A majority of the sewerage service agencies in the Bay Area have analyzed the potential for reuse of treated wastewater in their service areas. Those meeting certain financial, technical and environmental criteria were considered feasible and included on the 20-Year Project List for further facility planning, assessment and design. The continuing planning process will also investigate the further development of markets for reclaimed wastewater and the regional alternatives for reuse of treated wastewater.

For the purposes of comparison, rough estimates were made of the costs of alternative water supply management program elements. That comparison appears on Table 5 of Volume I of the EMP and formed a basis for the the recommendations in the Water Supply Management Plan.

Regional and Subregional Alternatives

For a discussion of alternatives on a regional and subregional level, the reader is referred to the section in Chapter IV titled "The Regional Supply and Demand Situation" and especially the New Drought Scenario/Old Drought Scenario discussion.

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The recommendations of the water supply management plan are an initial step to implement a program of action to maintain and enhance the existing water available to the region. Water savings and reuse of reclaimed wastewater would result in long-term benefits and, in particular, allowing water for more critical uses such as the potable water supply needs of the future population. Actions taken to protect and manage the region's groundwaters would result in maintaining their viability and function in the physical system.

Short-term uses of available resources/materials would be required for actions such as construction of wastewater reclamation facilities, manufacture of water conservation devices and, especially, the construction of the component parts of the water supply projects. In the latter case, the relationship is described in the environmental documents cited earlier which were prepared for some of the projects. Further discussion of the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity have or will be discussed in the environmental documents required for Federal and State financial assistance for construction of wastewater reclamation projects.

ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

No significant irreversible environmental changes would result from implementing the water conservation recommendations. However, the wastewater reclamation recommendations could result in significant environmental changes in the event that construction of new treatment facilities, plant expansions to accommodate reclamation and additional distribution systems were required. The resource value of land disturbed or altered altogether by construction will vary from project to project. Again, those impacts will be addressed in the facilities planning process.

The major significant irreversible environmental changes of the Water Supply Management Plan are associated with the major water supply projects currently proposed for construction or in the early stages of construction. In the case of the dams and storage reservoirs, the irreversible change involves changing free flowing streams to flat water environments, the inundation of valleys and the loss of resources of the inundated land. The aqueducts would change the environmental character of the land through which the aqueducts pass and the character of streams crossed. These impacts have been discussed in the environmental documents discussed earlier. Such changes associated with system intertie proposals would be analyzed in the continuing planning process and by implementing agencies in the planning phase when they prepare the environmental documents required by Federal and State laws.

THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS

The water conservation and wastewater reclamation recommendations should not have growth inducing effects. Water saved and use of reclaimed wastewater would free a certain amount of potable water supply to serve future growth. In areas where development is currently constrained by a shortage of supply, the effect of conservation and reuse measures could be to accommodate growth in those areas in the future.

Plans to construct dams and major water supply reservoirs often face opposition on the basis of their growth inducing characteristics and the adverse environmental impacts associated with the induced growth. The growth inducing aspects of the major dam project, the Warm Springs Dam and Lake Sonoma Project, are described in the Environmental Impact Statement prepared by the Corps of Engineers for that proposed project. A major benefit of a comprehensive analysis of conservation and reuse and system interties would be the ability to assess the need for major water supply projects. As long as the actions recommended are consistent with the EMP,

the effect should be to accommodate growth in the region with minimal environmental, economic and social impacts. Rather than inducing growth, the comprehensive strategy for water supply management would constitute another tool for accommodating growth planned for in the region.

IMPACTS OF THE SOLID WASTE MANAGEMENT PLAN

DESCRIPTION OF THE PROPOSED PROJECT

Sixteen policies are proposed to improve solid waste management and meet applicable Federal and State standards and objectives. Each policy includes a series of actions to meet plan objectives. Together the recommendations describe a physical system for managing the Bay Area's solid wastes. They also provide a regional approach for solving the basic solid waste management problem in the Bay Area: that we are burying most of our wastes in landfills instead of conserving and recovering materials and energy from wastes. A complete description of the recommendations appears in Chapter V of Volume I of the EMP and on the Plan Recommendations tables. Changes made in the original eighteen policies of the Draft EMP include clarification of intent and of terms, re-orienting of tasks, deletion and/or consolidation of policies, and changes in responsible agency(s). Those changes do not appreciably affect the significant environmental effects noted in the Draft EIR. The sixteen policies are:

- Policy 1 - The regional solid waste management plan should primarily be based on the county solid waste management plans, coordinated with State planning and integrated areawide environmental management planning; primary responsibility for adequate solid waste management shall rest with local governments.
- Policy 2 - The amount of municipal wastes going to Bay Area landfills should be reduced by 30% by 1982, with emphasis on job-intensive, inexpensive, source separation/recycling measures.
- Policy 3 - The regional solid waste management plan should focus on multi-jurisdictional projects for waste reduction and recovery of materials and energy from solid waste.
- Policy 4 - All solid waste disposal sites must be situated, designed and operated and eventually closed down in a proper manner to provide protection to the surface and groundwater quality and the natural environment as well as protection of public health and safety.
- Policy 5 - Where possible, the existing permit process should be improved to facilitate implementation of large-scale energy recovery projects.
- Policy 6 - Federal, State and local public education programs are essential to promote awareness of feasibility and need for waste reduction.
- Policy 7 - Federal, State and local governments should adopt legislative and administrative changes which promote waste reduction, where appropriate.
- Policy 8 - Facilitate regionwide cooperation in developing stable, adequate markets for secondary materials.

Policy 9 - Federal, State and local governments should adopt legislative and administrative changes to support stable, adequate markets for secondary materials.

Policy 10 - All levels of governments should encourage development of source separation programs, where appropriate.

Policy 11 - Adequate planning for hazardous waste management requires accurate data.

Policy 12 - Hazardous industrial waste reduction, source separation and recovery should be promoted in the interest of limiting land disposal.

Policy 13 - Regulations should ensure safe and proper handling of hazardous wastes.

Policy 14 - Future Class 1 disposal sites and facilities should be located so that they do not have adverse effects on human health and safety, air and water quality, wildlife, critical environmental resources and urbanized areas.

Policy 15 - The regional Wastewater Solids Study recommendations, when completed, should be integrated into local and regional solid waste management plans.

Policy 16 - Facilities planning, design, and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the county solid waste management plans, the Environmental Management Plan (208 plan), and Federal and State requirements.

SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The potential environmental, institutional/financial, economic and social impacts of actions recommended to carry out the sixteen policies for solid waste management are summarized on the Plan Recommendation tables in Chapter V of Volume I of the EMP. The section titled "Benefits and Costs of Plan Recommendations" in Chapter V summarizes the significant impacts.

As required by NEPA and CEQA, this discussion assesses the significant environmental effects of the Solid Waste Management Plan. The significant environmental effects are:

- o impacts on air and water quality
- o reduction of public health and safety hazards
- o aesthetic, nuisance and ecological effects related to solid waste
- o long-term benefits for the resource base from waste reduction and recovery
- o energy effects

For the purposes of the EIR, the policies in the Solid Waste Management Plan have been classified into four types of recommendations:

- o management planning recommendations
- o landfill operational improvements recommendations
- o advocacy recommendations for waste reduction, recycling and secondary materials markets
- o construction related recommendations.

The first type, management planning recommendations, includes public education, research, market development, legislative and administrative changes and continuing integrated solid waste management planning. Policies of this type are Policy 1, 6 and 7. The significant environmental effects of actions recommended to implement these policies are the expected benefits for the natural/physical environment as additional information improves the decision-making capabilities of the numerous public agencies and private firms involved in solid waste management activities. Improved information and dissemination of that information should also affect citizen attitudes and decisions about solid waste management activities in the home. These recommendations would also benefit the natural/physical environment as a result of improved waste handling and disposal practices.

The second type of recommendation would result in improvements in current practices of landfilling wastes. Policies of this type are Policy 2, 4, 11 and 13. These include upgrading operational requirements at landfills and enforcing requirements for handling and disposal of hazardous wastes. The significant environmental effects are the expected benefits for environmental quality (protection of surface and groundwater quality and improved air quality at landfills-dust and odor), public health and safety, and resource protection.

A third type of recommendation involves advocating Federal, State, local and private enterprise actions that would result in waste reduction, source separation, recycling and a competitive position for secondary materials.

Policies of this type are Policy 3, 7, 8, 9, 10 and 12. The expected benefits include conservation of resources (including energy), and protection of environmental quality.

The fourth type of recommendation would ultimately result in construction related activities. Policies of this type are Policy 5, 14, 15, 16, Action 12.2. Demonstration projects are advocated to promote large-scale resource recovery planning. Facilities are recommended to process, handle and dispose of wastewater solids (sewage sludge). Recovery of hazardous wastes, and other materials and energy recovery would require facilities in many cases. These actions are premised on the expected benefits of resource recovery and energy production and conservation. The significant environmental effect is the expected slowing of the rapid consumption of diminishing resources. Before any specific action is taken, the proposed projects will be investigated further and alternative facilities and processes will be planned. At that point, other agencies will become Lead Agencies under the definition of CEQA. Federal grantees would be subject to NEPA requirements. The site-specific environmental impacts of proposed projects would be assessed as required by Federal and State laws.

The San Francisco Bay Region Wastewater Solids Study is developing a regional plan for long-term wastewater solids management solids management and detailed facilities plans for the four largest wastewater management agencies (City and County of San Francisco, City of San Jose, Central Contra Costa Sanitary District and East Bay Municipal Utility District). The Regional Plan is being incorporated into the solid waste management recommendations. The Draft Project Report/EIR/EIS for Sludge Management at the four major facilities will be written and processed in the summer of 1978. The sludge management alternatives recommended in the Draft Project Report will be based on the Regional Plan analysis and recommended projects for sludge management. An impact assessment of the site specific environmental effects of sludge management projects recommended for the wastewater management agencies will be discussed in the Draft Project Report/EIR/EIS.

The sludge management system includes sludge process, transport and disposal or use. With the exception of thermal and combustion processes, the environmental effects of processing are not normally significant. The potential for significant environmental effects is associated with the transport and disposal/use components of the system.

The significant environmental effects include the potential for water quality impacts (e.g. surface runoff associated with landfilling and land application, and groundwater contamination), air quality impacts (e.g. odor, transport truck emissions), and physical resource impacts (e.g. the effects on the supply and use of land associated with landfill disposal and land application) and energy impacts (truck and pipeline transport and energy production associated with co-combustion). Land application of raw and composted sludge may have beneficial effects when used in agriculture, siviculture, public parks, golf courses, highway rights-of-way, and home gardens. Possible health effects, associated with plant uptake of heavy metals such as cadmium when sludge is used in agricultural production, require careful monitoring and selection of crops that minimize the uptake of metals.

ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS

The potential for significant (adverse) environmental effects is associated with the development of new and expansion of existing landfills and the operation of those facilities as well as the construction of source separation, resource and energy recovery facilities and sewage solids handling facilities and disposal alternatives. These effects include the dust, noise, surface runoff and energy use related effects associated with construction activities. Other related effects include the loss of resource value on or adjacent to the site, the changes in land use necessary to accommodate new or expanded facilities and land disposal alternatives and visual amenity impacts. The dust and noise effects can be minimized by noise and dust abatement measures. Careful engineering design and siting measures will minimize the resource effects of changes in land use and visual amenity effects. The recommendations for surface runoff controls during construction (Control erosion) contained in the County Surface Runoff Control Plans would minimize those adverse environmental effects.

Operation Effects

Other potential significant (adverse) environmental effects of recommended actions result from operation of solid waste management facilities. The major potentially adverse environmental effects of operation of any number of the current or proposed facilities (e.g. landfills and resource recovery projects) are the potential impacts on air and water quality. Those effects would be minimized or eliminated by coordination with the air quality and water quality management planning recommendations. All facilities and operating practices will have to meet Federal and State air and water quality standards and objectives.

Effects of Wastewater Solids Projects

Construction of wastewater solids management facilities may have significant (adverse) environmental effects of a short-term, localized nature. These include the dust, noise, surface runoff and energy-use related effects associated with construction activities. Other effects may include the alteration of land (and in some cases changes in land use) and visual impacts associated with the construction. These effects can be minimized by noise and dust abatement measures, careful engineering design, and siting measures. The recommendations for surface runoff control measures at construction sites in the County Surface Runoff Control Plans would minimize any construction related adverse effects of surface runoff.

Other significant (adverse) environmental effects are associated with the sludge management system (sludge process, transport and disposal or use). The significant effects of processing are associated with thermal and combustion processes. This component of the system would be subject to Federal and State air quality standards, thus minimizing any potential harm to the environment. The significant effects of the transport system are associated with transport truck emissions and energy use. The mobile source emission control recommendations (General Policy II of the Air Quality Maintenance

Plan) would minimize those adverse effects. Vehicle exhaust emission controls would minimize harm to the environment both by reducing emissions and from the energy savings through improved maintenance of engines and emission control systems.

The potential significant (adverse) effects of the disposal or use component of the sludge management system are associated with landfilling sludge or land application. One effect is the surface runoff and groundwater pollution potential of both alternatives. Harm to the environment would be minimized through coordination with the Water Quality Management Plan recommendations (and the Water Supply Management Plan recommendation to protect the region's groundwater resource through wise management) to protect water quality and meet Federal and State water quality standards and objectives. Another effect of land application of sludge is associated with the potential for plant uptake of heavy metals such as cadmium when sludge containing such heavy metals is used in agricultural production. The potential public health effects can be mitigated by careful monitoring, selection of crops that minimize the uptake of metals, or use of sludge as a fertilizer for other than food and/or forage production, e.g. forests, open space areas, landscaping. Public health standards set by the Department of Health control the use of sludge.

The potential significant (adverse) environmental effects (and measures to minimize those effects) of the wastewater solids management recommendations are being identified in the Regional Wastewater Solids Study. The Draft Project Report/EIR/EIS scheduled for completion in the Spring of 1978 will identify the potential significant (adverse) environmental effects associated with the sludge management projects for each of the four largest wastewater treatment agencies in the Bay area.

Other projects proposed for sludge management at other treatment facilities in the region will be planned as a part of the Section 201 facilities planning process and will have EIR/EIS documents prepared for them as required by CEQA and NEPA.

ALTERNATIVES TO THE PROPOSED ACTION

The No Action Alternative to the Solid Waste Management Plan

The major alternative to the Solid Waste Management Plan in its entirety is one of no action. The impacts identified in the Plan Recommendation tables in Chapter V were measured against that alternative.

The no action alternative was not felt to be feasible for several reasons. SB 424 (Chapter 689 of the Statutes of 1977), which amended SB 5 (Nejedly-Z'berg-Dills Solid Waste Management and Resource Recovery Act of 1972), requires ABAG to prepare a Bay Area solid waste management plan. The required plan must respond to issues identified in the county solid waste management plans as needing a regional perspective and solutions. Additionally, the plan would ensure the consistency of county and regional plans.

Another reason that no action is not a feasible alternative is that without a regional solid waste management plan there would be no regional scope to the critical solid waste issues facing the region. No action would not result in the needed coordination of multi-county resource recovery projects, in the coordination of efforts to develop markets for secondary materials, or a regional approach to identification of potential Class I (hazardous wastes) disposal sites. There are several issues identified in the county solid waste management plans that cannot be dealt with at the intra-county level. While those issues are shared problems, a viable program requires a joint and

cooperative approach involving both public agencies and private firms to identify a regional plan for action.

Several alternatives were considered and rejected for recommendations of the solid waste management chapter. Those alternatives and the reasons for rejection are as follows:

Alternatives to Municipal Wastes Management

One alternative to the proposed policies for municipal wastes management would have involved the re-examination of the nine county solid waste management plans and the development of a truly regional management system through optimization of regional and subregional solid waste processing, transfer, and disposal facilities with or without the constraint of county boundaries. For example, under this alternative, the East Bay Municipal Utility District (EBMUD) could become a subregional (two-county) solid waste management agency.

This alternative was not considered practical or publicly desirable. While regional alternatives were in fact discussed in the county plans, the requirements and deadlines of SB 5 made concentration on intra-county solid waste management systems mandatory.

The county plans cover all aspects of solid waste management within the county, including collection. Collection, with very few exceptions, is carried out by private operators under franchises with local governments. While collection is entirely a local responsibility, sometimes it is inseparable from processing and disposal as the franchise agreements, which usually run for several years, may specify the disposition of the collected wastes.

Implementation of county and regional solid waste management plans is largely vested in the county solid waste management authorities. Planning for regional and subregional processing and disposal systems requires the participation of affected local governments and the franchised operators in negotiating the necessary changes in franchise agreements.

Another general alternative would have involved the development of a regional solid waste management plan by combining the nine county plans and implementation programs. This alternative was rejected for several reasons.

The county plans will be revised by the counties in the future as more information becomes available about resource recovery technology, environmental effects, costs, and the amount of waste produced. The emphasis of county plans may change in the future as the county, its cities and the private sector update the county plan as required by law. There are already a number of multi-county disposal arrangements. As nearby sites close, there will inevitably be a need for more cross-county transfer and disposal. In addition, the economies of scale that can be realized from resource and energy recovery systems may spur multi-county participation. Further, individual county plans cannot fully address regional air and water quality issues related to solid waste management. These issues must be addressed by areawide plans required under the Federal Water Pollution Control Act and the Clean Air Act. Finally, Chapter 689 of the Statutes of 1977

requires that regional solid waste issues be addressed by a regional plan. Issues such as resource recovery and secondary materials are identified in most county plans as regional in nature. No county plan adequately addresses these issues. A viable program requires a regional, joint and cooperative approach involving public agencies and private firms.

Alternatives to Hazardous Wastes Management

One alternative to the proposed actions for hazardous waste management would have been to develop a comprehensive hazardous waste management system for the region instead of accepting the present system and making recommendations to improve the present system.

However, without accurate data about the quantities and types of wastes being generated, it would be very difficult to develop a more comprehensive or long-range management system. Therefore, this alternative will be considered in the continuing environmental management planning process using data collected.

Alternatives to Wastewater Solids Management

Alternatives for wastewater solids management are being considered by the San Francisco Bay Region Wastewater Solids Study. The alternatives for solids processing and disposal or use include commercial and agricultural use, composting/marketing, land disposal, energy production and combustion. The alternatives discussion in the Regional Wastewater Solids Plan will describe those alternatives in greater detail.

General Alternatives for Assessment in the Continuing Planning Process

Within various subparts of the program outlined for continuing solid waste management planning, alternatives and combinations of management approaches will be explored. For example, the facilities plans prepared for sludge management at the four largest wastewater treatment agencies will identify alternatives. (The Draft Project Report/EIR/EIS portion of the Bay Region Wastewater Solids Study will be available in the summer of 1978).

Resource recovery can be accomplished in a number of ways as can source reduction and energy recovery. Alternatives will be identified and assessed.

Alternative sites for disposal of hazardous wastes as well as alternatives to landfilling these wastes will be investigated. Alternative development and identification of impacts of alternatives will be an important aspect of continuing integrated solid waste management planning.

Institutional Alternatives to Implement the Solid Waste Management Plan

An alternative that could have been recommended throughout the Solid Waste Management Plan was the creation of new agencies or a "super" regulatory agency to implement the recommended actions.

The Environmental Management Task Force Plan Implementation Committee directed ABAG staff with regard to institutional arrangements for plan implementation. Chapter VIII of Volume I of the EMP describes the "guiding principles"

developed by that committee. The Committee indicated (and the EMTF endorsed for the draft plan) that successful initial implementation of the plan required the use of existing agencies with implementing authorities where those agencies could reasonably be presumed able to effectively implement proposed actions. The implementing authorities for plan recommendations are distributed among many agencies in the region. Past efforts have shown that cooperative agreements (e.g. Joint Powers Authorities, Memoranda of Understanding) can be effective means of implementation. The EMTF action ruled out changes in institutional structures such as the creation of new agencies or a "super" regulatory agency.

In addition to the no action alternative to the Solid Waste Management Plan in its entirety and the alternatives considered for the Municipal and Hazardous Waste policies and actions, alternatives to specific policies and actions were also considered.

Alternatives to Policy 1

The no action alternative was considered for Policy 1 and rejected as not feasible. SB 424 requires the regional Solid Waste Management Plan to be based primarily on county solid waste management plans. SB 5 states that primary responsibility for adequate solid waste management and planning shall rest with local government. No action would not have resulted in regional plan based primarily on county plans with local government maintaining required responsibilities. In addition, the Resource Conservation and Recovery Act (RCRA), SB 424 and Section 208 of the Federal Water Pollution Control Act Amendments requires coordination of regional, State and local solid waste management planning with the 208 Plan.

Alternatives to Policy 2

The original Policy 2 was consolidated into Policy 1. The new policy is an explicit statement of the overall goal of the Solid Waste Management Plan. It provides a definitive focus and clarifies the intent of subsequent policies which emphasize compatible approaches to resource recovery and reuse.

The quantified goal of 30% reduction in landfilling of municipal waste is a reasonable goal. Pursuant to S.B. 5, the State Solid Waste Management Board set a goal of 25% reduction in each county by 1980. Few counties have made progress toward implementing programs to achieve that goal by 1980. The demonstrated effectiveness of small-scale, labor intensive source separation and recycling programs in reducing the amount of municipal wastes being disposed of by landfilling indicates that a regionwide goal of 35% reduction by 1982 can be achieved. The potential exists to exceed the goal, particularly as other supportive policies and actions are implemented.

Use of a quantified target was judged more reasonable than no quantification. Working towards a goal allows the demonstration of measurable progress. Meeting the regional goal contributes to and supports the SSWMB goal for the counties.

Alternatives to Policy 3

The no action alternative was not considered a feasible alternative. S.B. 5, S.B. 424 and RCRA require such focus in regional solid waste management planning.

Alternatives to Policy 4

The no action alternative was not considered a feasible alternative. Federal and State laws, regulations and water quality standards and objectives require this of disposal sites.

Alternatives to Policy 5

Policy 5 was reworked to support the emphasis of State and Federal legislation on energy-recovery. It also clarifies the intent of the SWMP and re-orient the tasks of the continuing planning process for the Regional Solid Waste Management Plan. S.B. 424 requires a focus on issues needing a regional perspective so that no action would not provide the necessary overview to facilitate large-scale energy recovery projects.

Alternatives to Policy 6 and 7

The original Policy 6 and 7 addressed the existing solid waste permit process and recommended actions to streamline, clarify and integrate procedures. Those concepts were incorporated into the reconstituted Policy 5.

This new Policy 6 was originally Policy 8. It has been clarified to indicate that public education programs are necessary at all levels of government. New Policy 7 was originally Policy 9. It has been clarified to indicate that all levels of government should take appropriate actions to promote waste reduction.

The no action alternative was not considered a feasible alternative to Policy 6 and 7. It would maintain the status quo with little evidence that current situations would change in a timely, coordinated manner. Public support and acceptance through a public education program at all levels of government is important to successful waste reduction and resource recovery. Changing manufacturing standards and regulations also appears necessary as current incentives have not been adequate to result in industry initiated waste reduction.

Alternatives to Policy 8 (Formerly Policy 10)

The no action alternative was not considered feasible. It would effectively maintain the status quo with little evidence that change would occur in a coordinated manner. Market development is needed for secondary materials. Without a stable market, resource recovery programs cannot be carried out effectively. Actions are necessary to facilitate secondary materials market development through regionwide cooperation.

Alternatives to Policy 9 (Formerly Policy 11)

The no action alternative was not felt to be feasible. It would effectively maintain the status quo with little evidence that change would occur in a timely, coordinated manner. Currently, secondary materials are not as competitive as virgin materials. Governmental action is needed to support markets for secondary materials. Another alternative considered was to recommend that industries improve the competitive positions of secondary materials and products containing secondary materials. This action was not selected. In general, industries appear unwilling to introduce such

changes to the market system by themselves--in other words, without public (government) support. Wording clarification has this policy support appropriate administrative and legislative actions at Federal, State and local levels of government, and Policy 8 actions at regional level.

Alternatives to Policy 10 (Former Policy 12)

The no action alternative was not considered feasible. It would effectively maintain the status quo with little evidence that change would occur in a timely, coordinated manner. Source separation is an effective way to recover reusable resources. Programs should be supported by all levels of governments. Another alternatives considered was to recommend that private scavenger companies develop source separation programs. This alternative was not selected. The selected policy would not exclude private scavenger companies from developing source separation programs. In general, the private sector will collect source separated materials only if adequate incentives exist for them to do so. Actions are necessary to affect source separation programs.

Alternatives to Policy 11 (Former Policy 13)

The no action alternative was not considered feasible. RCRA requires accurate data for hazardous waste management.

Alternatives to Policy 12 (Former Policy 14)

The no action alternative was not considered feasible. It would effectively maintain the status quo with little evidence that change would occur in a timely, coordinated manner. If current trends continue, hazardous waste management would become a more serious and bigger problem and additional disposal site could be needed. Actions appeared necessary to encourage waste reduction, source separation and recovery of hazardous wastes.

Alternatives to Policy 13 (Former Policy 15)

The no action alternative was not considered feasible. RCRA and other State and Federal laws require safe and proper handling of hazardous wastes.

Alternatives to Policy 14 (Former Policy 16)

The no action alternative was not considered feasible. It would effectively maintain the status quo with little evidence that change would occur in a timely, coordinated manner. It takes at least two years to develop a Class I disposal site (from initial planning to availability of the site for use). Under the status quo, potential hazardous waste sites would not be investigated. If sites reach capacity and continued landfilling is necessary, it would take two years to develop those sites. Advanced planning and identification of potential sites appear to be an advised precautionary measure.

Alternatives to Policy 15 (Former Policy 17)

The no action alternative was not felt to be feasible. The Federal Water Pollution Control Act requires adequate handling and disposal of sewage sludge to protect ground and surface water quality. The county solid waste management plans identified management of sewage sludge as a regional issue. A regional plan for sewage solids management and facility planning recommendations for wastewater treatment facilities is required, and on completion should be integrated into local and regional solid waste management plans.

Alternatives to Policy 16 (Former Policy 18)

The no action alternative was not considered feasible. Sections 208 and 201 of the Federal Water Pollution Control Act require future 201 projects to be consistent with the Environmental Management Plan. All wastewater solids management facilities proposed by local wastewater management agencies must be consistent with county and regional environmental plans and Federal and State requirements.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The solid waste management recommendations would not change practices in the next few years. As such, the resource, energy and land consumptive aspects of current solid waste management practices will continue. The programs recommended to investigate and promote alternatives to landfill disposal, materials and energy recovery and waste reduction would all contribute to the maintenance and enhancement of long-term productivity of diminishing resources, including land.

ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The environmental changes associated with the solid waste management recommendations are not entirely irreversible in a long-term basis. Continued landfilling while alternative practices are further investigated and demonstration projects are carried out is not entirely irreversible. Most landfills that reach capacity can, after a period of time and following appropriate reclamation measures, be converted to other uses such as parks and other recreational facilities.

A major rationale for developing sewage solids disposal alternatives, source separation, materials and energy recovery and secondary materials markets is to slow the process of rapid consumption of diminishing resources. These actions would reduce or eliminate the irreversible environmental changes associated with current solid waste management practices of landfilling. Source separation, materials and energy recovery projects may result in irreversible environmental change when land is consumed for their construction, effectively changing the landuse potential of that land.

THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS

The solid waste management recommendations should not have growth inducing impacts nor will any secondary effects of the recommendations have such impacts.

IMPACTS OF THE AIR QUALITY MAINTENANCE PLAN

DESCRIPTION OF THE PROPOSED PROJECT

Four policies are proposed to improve air quality and meet the Federal standard for oxidants. Each policy includes a series of actions to carry out the objectives of the policy. A complete description of the recommendations appears in Chapter VI of Volume I of the EMP and in summary form on the Plan Recommendation tables. A majority of the changes in Policy I-III involve clarification of intent, specification of terms used, deletion, reorganization and minor additions. The significant environmental effects of those changes do not appreciably differ from those discussed in the Draft EIR. Changes in Policy IV involve deletion of one set of maintenance measures (land use controls) and substitution of another set. The four policies are:

General Policy I - Reduce hydrocarbon emissions from stationary sources

General Policy II - Reduce hydrocarbon emissions from motor vehicles

General Policy III - Reduce motor vehicle emissions through transportation actions to reduce vehicle use

General Policy IV - Ensure maintenance of the oxidant standard beyond 1985-87

A Supplement to the Draft EIR was prepared to discuss the significant environmental effects of the substitute maintenance measures. In keeping with the public participation procedures followed throughout the Association's environmental management planning process, notice of availability of the Supplement to the DEIR was published more than 30 days prior to final action on the EMP. This provided additional opportunity for public review and comment on the environmental effects of the substitute maintenance measures proposed for inclusion in the AQMP portion of the EMP. The Supplement to the Draft EIR was issued in keeping with the spirit of the California Environmental Quality Act.

Significant environmental effects of the new Policy IV, as discussed in the Supplement to the Draft EIR, are incorporated into this Final EIR. The discussion of the significant environmental effects of the original Policy IV (Alter regionwide development patterns to reduce automobile travel by means of local and regional policies on land use and urban services) contained in the Draft EIR is deleted to reflect their deletion from the EMP.

THE SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The potential environmental, institutional/financial, economic and social impacts of actions recommended to carry out the four policies for air quality maintenance are summarized in the Plan Recommendation tables in Chapter VI of Volume I of the EMP. The significant impacts are discussed in the section titled "Benefits and Costs of the Plan."

As required by NEPA and CEQA, this discussion assesses the significant environmental effects of the Air Quality Maintenance Plan. The significant environmental effects are:

- o reductions in hydrocarbon emissions
- o improvements in public health
- o reduction in damage to vegetation
- o improved visual amenities
- o physical resource supply benefits
- o energy consumption impacts

The AQMP is a broad-based strategy involving stationary source controls, mobile source controls and transportation controls to meet the Federal photochemical oxidant standard by 1985-87 and potential controls to ensure maintenance of the standard beyond 1985-87. The strategy includes requiring permits for new and modified sources of air pollution emissions--commonly referred to as New Source Review (NSR).

The significant environmental effects of the AQMP broad-based strategy include the direct effects of reduced hydrocarbon emissions. Without considering reductions from New Source Review the controls in the broad-based strategy will almost reduce emissions in 1985 enough to meet the Federal ambient oxidant standard of 0.08 ppm. The additional reductions needed to meet the standard can be achieved through application of new source review regulations. The AQMP projections in the year 2000 (without NSR), assuming implementation of a broad-based strategy, show violation of the oxidant standard. Continued application of the NSR program could result in sufficient emission reductions to ensure long-term maintenance of the standard.

Other significant environmental effects of the broad-based strategy are the public health benefits, and the reduction in damage to vegetation that are indirect benefits of improved air quality. Because photochemical oxidants have been found to cause eye and nasal irritations, irritation of mucous membranes, respiratory distress, coughing, increased lung fluid, rapid pulse rate, lowered blood pressure, asthma attacks and overall decreases in the quality of human performance, the reductions in hydrocarbon emissions and thus exposure to photochemical, oxidant and ozone concentrations should evidence decreased incidences of these problems. The benefits would be particularly significant for sensitive population groups such as the elderly, children and the chronically or temporarily ill. The general population should also benefit from the reductions. Although the long-term exposure effects from moderate levels are not as easily observed as those from short-term exposure to high levels of pollutants, reduced emissions and concentration levels should have beneficial health effects.

Reductions in adverse biological effects on vegetation would result from improved air quality. Included in the adverse effects on vegetation that would decrease are: visible injury and discoloration of foliage, leaf drop, reduced plant vigor and growth and reduced total loss (plant death).

Trees, shrubs and many agricultural crops in the Bay Area are affected by the oxidant levels which occur here. Certain crops are no longer grown here (snap dragons, chrysanthemums) and others evidence serious damage (grapes,

carnations, orchids). Crops such as grapes and ornamental plants are specialty crops grown in few other parts of the country. They are an important component of the region's economy. To realize their productive value, certain specialty crops must be grown in locations proximate to urban areas. Cut flowers are an example of such a specialty crop. Many Bay Area ornamental growers have moved to Half Moon Bay and Salinas to avoid air pollution damage. Improved air quality would improve the viability of this important sector of the Bay Area economy.

The Air Quality Maintenance Plan includes four types of recommendations. The first type of recommendation (General Policy I) includes industrial source controls and process changes to affect a reduction in hydrocarbon emissions. Source controls involve the installation of pollution control equipment such as scrubbers, secondary seals, floating roofs, balance systems, and vapor and solvent recovery systems. Process changes include changing production inputs to use of paints and other coatings which have a high solids content or are water-based. Several of these controls require resources (construction materials) for their manufacture.

There are several significant environmental effects associated with the stationary source control recommendations in addition to the improvements in air quality. Certain controls are energy consumptive (water based coatings and solvent incineration), others produce energy savings (high solids coatings and improved vapor recovery systems). An improvement in the visual quality of the region is expected from the reduced amounts of hydrocarbons available for reaction with other gases to form photochemical aerosols. The control measures proposed are designed to meet the Federal oxidant standard. A reduction in hydrocarbon emissions and concentrations would result in public health benefits as discussed.

Another type of recommendation, General Policy II, requires additional exhaust emission controls on light and heavy duty vehicles to affect reductions in hydrocarbon emissions from those mobile sources. Several significant environmental effects are expected.

Reductions achieved by use of improved technologies for conventional engines should not have significant physical resources impacts. Use of alternative fuel sources could require new materials for engine manufacture (e.g. batteries for electrically-powered vehicles). Should new engine technologies result in use of less specialized fuels, one result would be a reduction in dependence on gasoline and/or petroleum. Improved mileage efficiency gains could mean annual savings of millions of barrels of oil. Other significant energy effects are expected. Improved maintenance (implemented through the recommended Statewide light and heavy duty vehicle inspection/maintenance program) and heavy duty gasoline vehicle retrofitting could save hundreds of thousands of barrels of oil each year. A significant improvement in the visual quality of the region's air is another expected significant environmental effect. The reduction in carbon monoxide emissions from motor vehicles would have positive health benefits particularly for individuals exposed to carbon monoxide concentrations in urban areas.

A third type of recommendation (General Policy III) involves reducing motor vehicle emissions through transportation controls that reduce vehicle use. The actions recommended include: preferential parking for carpools and vanpools,

development of a three-fold transit improvement strategy, high occupancy vehicle lanes and/or ramp metering, ridesharing service expansion, expansion of bicycle systems and consideration of completion of pollution-causing gaps in the freeway system. These actions would reduce hydrocarbon emissions. Another significant environmental effect would be the positive energy benefits from gasoline savings resulting from carpooling, shifts to transit and bicycles, and traffic flow improvements.

A reduction in auto accidents associated with peak period traffic flow improvements are also expected benefits. Some effect on development patterns may occur as incentives such as improved and additional transit service may encourage employees to consider residing closer to transit systems and their jobs.

Action 12 (MTC is requested to consider the following action "Complete construction of certain portions of State freeway systems in which there are now pollution-causing gaps") would not have significant environmental effects. If agreed to by MTC, a determination of where such pollution-causing gaps occur would be necessary. Any consideration of construction to eliminate them would be analyzed and assessed as a part of the Regional Transportation Plan. Moreover, actual construction would not proceed prior to project level planning/design actions taken by Caltrans. Throughout that entire process applicable Federal and State regulations would apply so that environmental impacts/effects would be dealt with in compliance with NEPA and CEQA.

The final type of recommendation (General Policy IV) involves identifying measures to maintain the oxidant standard beyond 1985-87. The Clean Air Act requires the AQMP to demonstrate the ability to meet established Federal air quality standards (in this case the Federal photochemical oxidant standard) and to maintain the standard following attainment. Because they are needed for long-term maintenance, responsible agency(s) action to adopt and implement these additional measures will not be necessary prior to 1985. The maintenance measures are identified for further analysis during the continuing planning process, with one or more of the measures to be adopted as necessary to ensure maintenance of the current Federal oxidant standard after 1985-87. Part of the analysis will include detailed assessment of the impacts of the substitute maintenance measures.

The substitute maintenance measures selected for inclusion in the AQMP are:

1. Reduce hydrocarbon emissions from small gasoline engines
2. Reduce hydrocarbon emissions from off-highway mobile sources
3. Implement more stringent vehicle exhaust emission controls--approximately 60-80% reduction beyond 1977 prescribed levels
4. Provide additional transit

Measures 3 and 4 are self-explanatory. Measure 1 involves controls for small gasoline engines. Two major categories of engine equipment are involved. The lawn mower (Lawn and Garden Equipment) category consists of push-type mowers, riding mowers, garden tractors, rototillers, golf carts, and miscellaneous lawn and garden implements. The miscellaneous utility engines category consists of small internal combustion engines in equipment such as chainsaws, generators, pumps, compressors (used in painting, sandblasting, surface coating). Engines are either 2-stroke or 4-stroke, with the former being significantly dirtier. Emissions from 2-stroke engines may be up to seven times the emissions from a 4-stroke engine.

Measure 2 involves two major mobile source categories. The farm equipment category includes many types of farm equipment powered by internal combustion engine, but predominant is the farm tractor. The construction equipment category includes vehicles and other equipment used in construction and earth moving, mining and quarrying, and lumber industries and other miscellaneous equipment. Predominant units are tractors (wheeled and track laying); other types are scrapers, graders, loaders, motor generators and compressors. Power is of two types (gasoline and diesel) with the latter being more of an issue for NO_x , particulates and oxides of sulfur.

The significant environmental effects of the substitute maintenance measures include the direct effects of reduced hydrocarbon emissions. These four measures are estimated to reduce hydrocarbon emissions by 24 tons/day by the year 2000. This reduction is the current estimated tonnage reduction necessary to show long-term maintenance of the Federal photochemical oxidant standard.

Other significant environmental effects of the substitute maintenance measures are the public health benefits, and the reduction in damage to vegetation that are indirect benefits of improved air quality.

The additional engine exhaust emission controls (small gasoline engines, off-highway mobile sources) and even more stringent vehicle exhaust emission controls -- 60-80% reduction beyond 1977 prescribed levels -- have additional significant environmental effects.

Reductions achieved by use of improved technologies for conventional engines should not have significant physical resource impacts. Use of alternative fuel sources could require new materials for engine manufacture (e.g. batteries for electrically powered vehicles). New engine technologies may result in the use of less specialized fuels, thereby reducing dependence on gasoline or petroleum. As more off-highway mobile sources are produced with diesel engines, the effect will be reduced demand for gasoline by this consumer sector. This could result in savings of thousands of barrels of oil each year. Improved mileage and efficiency gains realized in this category of controls could mean annual savings of millions of barrels of oil. An improvement in the visual quality of the region's air is another expected significant environmental effect. The reduction in hydrocarbon emissions from all of the additional vehicle emission controls would have positive health benefits as noted earlier.

The other identified maintenance measures--additional transit service--focuses on reducing motor vehicle emissions by reducing automobile use. In addition to the environmental effects noted for the substitute maintenance measures in general, another significant environmental effect would be the positive energy benefits from gasoline savings.

Estimated reductions of 2.2 - 4.4 million vehicle miles traveled (VMT) would be associated with a 25% increase in transit (for example). This would result in a savings of approximately 81,000 - 163,000 gallons of gasoline. An example 50% increase in transit would result in reductions of approximately 3.3 - 6.5 million VMT for a savings of 122,000 to 240,000 gallons of gasoline. These savings result from reduced auto use, shifts to transit as well as from traffic flow improvements.

ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS

The potential for significant (adverse) environmental effects of policies in the AQMP is associated with stationary source controls and the maintenance measures.

Stationary Source Controls

The potential significant (adverse) environmental effect of certain stationary source controls is their energy consumptive qualities. Controls of this nature are the water based coatings and solvent concentration reduction controls. This effect of those controls can be offset against the opposite effects of other stationary source controls (e.g. high solidscoatings and improved vapor recovery systems). The significant energy savings of other elements of the AQMP (vehicle emission controls, transportation controls and maintenance measures) would offset the consumption effects of these stationary sources on total energy use.

Maintenance Measures

The off-highway mobile source controls could potentially increase levels of carbon monoxide and oxides of nitrogen and sulfur. This potential direct effect of controls aimed at hydrocarbon emission reductions is associated with switching from gasoline powered to diesel powered engines. The potential for increased levels of CO, NO_x and oxides of sulfur (SO₂) assumes that reductions in hydrocarbon emissions would be implemented solely by fuel switching (i.e. from gasoline to diesel fuel) without concomitant diesel emissions control technology. However, manufacturers of the major types of off-highway mobile sources (agricultural tractors and construction equipment--tractors, scrapers, graders, loaders, etc.) are already working on lowering emissions from those engines. Diesel emission control technology is advancing and can be expected to be fairly sophisticated by the late 1980s and early 1990s when these hydrocarbon controls would be adopted and implemented if necessary to maintain the current Federal photochemical oxidant standard. In addition, non-attainment plans and other plans to be prepared under the 1977 Clean Air Act Amendments should provide for attainment and maintenance of other Federal air quality standards.

During the continuing planning process, control plans will be proposed for carbon monoxide, nitrogen dioxide, sulfur dioxide and particulates as needed to meet Federal standards and the requirements of the Clean Air Act. Many of the sources for which controls are proposed for long-term maintenance of the Federal photochemical oxidant standard will probably be sources considered for inclusion in those future control strategies. As a result, any potential increases in pollutant levels occurring as hydrocarbon emissions are reduced would be mitigated through emission controls instituted through the other control plans.

Similarly, any potential adverse public health effects associated with increased levels of these other pollutants as hydrocarbon emissions are reduced through fuel switching (via changes from gasoline to diesel powered engines) would be mitigated through the reductions in those other pollutants achieved through the future CO, NO_x, SO₂ and TSP control plans.

Other significant (adverse) environmental effects which cannot be avoided are associated with the increased consumption of diesel fuel due to increased transit. For example, a 25% improvement in transit service would constitute approximately 855 additional buses running an estimated 26.8 million miles per year by the year 2000. The diesel fuel consumed in such additional bus service is equivalent to 131 thousand barrels of crude oil per year, or 5.5 million gallons of gasoline. A 50% improvement in transit service equals approximately 1710 buses running an estimated 5.36 million miles per year by 2000 and consuming the equivalent of 263 thousand barrels of crude oil per year of 11 million gallons of gasoline. The increases in consumption of diesel fuel to provide additional transit cannot be mitigated. Improved diesel engine technology may result in increased fuel efficiency thus lowering consumption to some degree. Increases in consumption of diesel fuel may be traded off against estimated reductions in gasoline consumption as vehicle miles traveled by car are reduced.

Increases in transit service will also contribute to increased levels of carbon monoxide and oxides of nitrogen and sulfur. Localized increases in the levels (concentrations) of these pollutants may have adverse public health effects. These adverse effects will be mitigated as control plans will be developed for meeting established Federal standards for CO, NO_x and SO₂.

ALTERNATIVES TO THE PROPOSED ACTION

The No Action Alternative to the Air Quality Maintenance Plan

The major alternative to the Air Quality Maintenance Plan in its entirety is one of no action. The no action alternative is not feasible. The Clean Air Act Amendments of 1970 require each state to prepare state implementation plans for how ambient air quality standards will be met. For various reasons a completely acceptable plan for the Bay Area has never been adopted.

ABAG was designated the areawide waste treatment management planning agency (under the authorities of Section 208 of the FWPC Act Amendments). The California Air Resource Board and the U.S. EPA designated ABAG as the Bay Area lead agency to prepare an Air Quality Maintenance Plan. Preparation of the AQMP by the same agency preparing the areawide waste treatment management plan and the solid waste management plan would ensure that the inter-related issues associated with managing air, water and solid waste would be addressed.

Alternatives to the Stationary Source Controls, Mobile Source Controls and Transportation Controls

Chapter VI of Volume I of the EMP includes a section titled "Alternative Solutions." That section describes in some detail the process and rationale used in developing the proposed AQMP. A large number of alternatives or options were considered. Alternatives considered are shown in Table 3.

Maintenance Measures

One alternative to identifying substitute maintenance measures is no action. The Clean Air Act requires the AQMP to show attainment and

TABLE 3 - ALTERNATIVES TO AIR QUALITY RECOMMENDATIONS OF THE EMP

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
1. Enact new maximum SO ₂ emission of 300 ppm.	Affects sulfur recovery, sulfuric acid plants and combustion operations burning fuel oil, etc.	0	0	BAAPCD Engineering Estimate	Deferred for closer examination in the continuing planning process (CPP); this program is directed at controlling SO ₂ .
2. Reduce fuel sulfur content to 0.25%.	Affects sulfur recovery sulfuric acid plants and combustion operations burning fuel oil, etc.	0	0	BAAPCD Engineering Estimate	Deferred for closer examination in the continuing planning process (CPP); this program is directed at controlling SO ₂ .
3. Adopt NO _x controls for non-highway and construction equipment.	Primarily modifications on agricultural tractors, construction equipment, steamships, locomotives and two cycle engines.	0	0	BAAPCD Engineering Estimate	Possible conflict with the proposed oxidant control strategy. Requires closer examination.
4. Adopt NO _x limits for all new boilers.	Long term (15 to 30 years) program to require a new NO _x limit on boilers < 250 million BTU/hr. rating.	0	0	BAAPCD Engineering Estimate	Possible conflict with the proposed oxidant control strategy. Requires closer examination.
5. Adopt lower particulate loading - 0.1 to 0.05 gr/SCFM.	Primarily a change from any cyclone control to BAG House or Electrostatic Precipitator on 1000's of small operations.	0	0	BAAPCD Engineering Estimate	Deferred for closer examination in the CPP, this program is directed at controlling particulates.
6. Lower process weight allowance scale.	Less than 100 sources (e.g., Catalytic Crackers, Fluid Coking, Kilns and Fertilizer Plants) affected.	0	0	BAAPCD Engineering Estimate	Deferred for closer examination in the CPP, this program is directed at controlling particulates.
7. Lower process weight maximum.	Less than 100 sources (e.g., Catalytic Crackers, Fluid Coking, Kilns and Fertilizer Plants) affected.	0	0	BAAPCD Engineering Estimate	Deferred for closer examination in the CPP, this program is directed at controlling particulates.
8. Options 14-18 (Table 9) are all forms of BACT.	Best Available Technology with minor variations.	Very Significant		BAAPCD Engineering Estimate	Included in the AQMP (See Specific Proposals and Control Categories covered).

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
9. Options 19-27 are all forms of New Source Review.	Review of new or modified sources; many variations as described.	Significant	BAAPCD Engineering Estimate	Included in the AQMP (See Discussion in Chapter 7).	
10. Institute a comprehensive program to reduce energy use.	Efficient building heating and air conditioning, reduction of illumination & display lighting - promote heat recovery.	Not Significant	BAAPCD Engineering Estimate	Will reduce emissions but would be primarily fuel conservation measures; it is not significant as an organic control.	
11. Plant operation scheduling - (many options as described in Table 9).	Seasonal (day, week, month) scheduling including close attention to interruptable operations & staggering operations on 7 vs. 5 day/week.	Not Significant	BAAPCD Engineering Estimate	Generally difficult due to social-economic factors and not a factor in reducing organic emissions. Does not conform with Federal and State approach of <u>continuous, positive emission reduction program.</u>	
12. Air monitoring combined with meteorological analysis.	Approach relies on accurately predicting problems and implementing needed controls.	Not Significant	BAAPCD Engineering Estimate	Isolates air pollution problems--not significant in organic emission control. Again, is not a continuous, positive emission reduction program.	
13. Adopt particulate regulation based on particle size.	Self explanatory.	0	0	BAAPCD Engineering Estimate	No effect on organic emissions (particulate control proposal).
14. Replace throw-away container with reusable containers.	Self explanatory.	0	0	BAAPCD Engineering Estimate	No appreciable effect on organic emissions.
15. Burn Solid Waste near point of generation to reduce long hauls.	Self explanatory.	Not Significant	BAAPCD Engineering Estimate	Not a significant source of organic emissions; low potential benefits.	
16. Apply 1309, with modified trade-off of 134 & 1311.2.	New Source Review with clearly defined variations.	Significant	BAAPCD Engineering Estimate	NSR Rule included in AQMP.	

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
17. Require some sort of retrofitting on older plants.	Applies BACT to newer plants plus retrofit of existing plants on a time schedule.	Significant		BAAPCD Engineering Estimate	Included in AQMP as NSR and BACT. Reducing emissions in this manner and permit additional growth in region.
18. Penalty charge or tax based on amount of emission to encourage reductions.	Emission charge for contaminants to effect industrial control changes to BACT.	Not Significant		BAAPCD Engineering Estimate	Open to charge that large companies can buy emission allowance.
19. Lowering the Reid Vapor Press of gasoline to reduce hydrocarbon emissions from storage & handling vehicle.	Affects ~ 4 million vehicles, 6000 service stations, 60 bulk plants and all refineries & some chemical plants.	30	35	BAAPCD Engineering Estimate	An ongoing American Petroleum Institute study indicates that this option is not viable. When formal report is available, this option should be re-examined.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)				BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000				
a Implement an evaporative emissions retrofit program for all vehicles, and/or recommend catalytic retrofit program for post '71 vehicles able to operate on unleaded gasoline.	<p>Retrofit programs consist of the addition of a new item, or the modification or removal of an existing item of equipment on a vehicle after its initial manufacture.</p> <p>In the Bay Area all non-exempt vehicles undergoing change-of-ownership or initial registration require the installation of:</p> <ul style="list-style-type: none"> (1) An NO_x control device for '66-'70 models. (2) An exhaust emission control device for '55-'65 models. (3) A crankcase emission control device for '55-'62 models. <p>There have been no further developments of any retrofit programs to date.</p>					Reductions from evaporative retrofit programs assume that a 25% reduction can be attained from pre-1980 vehicles. Reductions from catalyst programs assume 50% reduction can be attained by retrofitting non-catalyst vehicles. There would be no benefits by 2000 because the affected vehicles will have been retired.	Retrofit programs become less effective as old pre-controlled cars are retired. Thus, this is a short term measure. By 1975 the pre-catalyst vehicles (1971-1975) and pre-2gm/test vehicle (i.e., pre-1980) will only represent about 2% and 20%, respectively, of the total vehicle miles travelled. Since these percentages decrease rapidly thereafter the high cost and the short term benefit of this program does not appear to warrant it.
<u>Type of Retrofit Program</u>							
	Evaporative Catalyst	~ 4 ~ 6	Not Applicable				
a More stringent certification of compliance procedures.	New vehicles from each engine family are randomly selected from the manufacturers and tested for their emission characteristics by the CARB. More rigorous certification testing procedures could be employed to reduce maintenance requirements of engine components which influence emissions or, where possible, eliminate this maintenance completely. More stringent warranty conditions on emission control systems could also be utilized.	-	-		The air quality benefits could be assumed to be the same as those reductions shown for the motor vehicle inspection program in 2000. This measure could not be feasibly implemented by 1985.		This measure could eventually replace the need for a Motor Vehicle Inspection Program (MVIP). The new technology that would be required to satisfy this control measure would take years to develop. Since this time frame is not known, it was decided to keep MVIP through the year 2000.

EST. HYDROCARBON
EMISSION REDUCTIONS
(Tons/Day)

1985 2000

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
(Continuation of previous Recommendation)	CARB has recently adopted regulations in certification test procedures for 1980 and later model vehicles that will require manufacturers of vehicles to make carburetors almost tamper-proof. This measure would recommend more stringent certification requirements which would promote changes in vehicle designs to minimize the need for maintenance and the possibility of tampering.				
o Adopt a more comprehensive new motor vehicle surveillance program.	Currently, all production vehicles are checked at the end of the assembly line to ensure that the emission control systems are properly installed and functional. The manufacturer also tests 2% of all vehicles using prescribed Federal test procedures. ARB staff periodically examine the manufacturers' quality control facilities. In addition, all new vehicles at dealerships and preparation centers are spot-checked.	0	0	The benefits of this program are assumed to be achieved by the proposed Motor Vehicle Inspection Program (MVIP).	Since all newly acquired vehicles must be registered with the Department of Motor Vehicles, these vehicles could be required to satisfy MVIP requirements before such registration. Thus, it is assumed that the MVIP would eliminate the need to step-up this existing program.
	Title 13 of the California Administrative Code gives ARB the power to implement standards for engine setting tolerances, idle emissions and inspections of control systems to which new and used vehicles must conform as a condition of sale.				173
	Cross-check testing could be randomly performed on production vehicles currently being tested by the manufacturers. Dealership inspections could be ex-				

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
(Continuation of previous Recommendation)	expanded to include used as well as new vehicles to deter maladjustments being made to maximize vehicle performance.				
o More stringent evaporative emission controls.	<p>Evaporative emissions from the fuel system are produced by two effects, (1) daily ambient atmospheric temperature variations and (2) higher fuel temperature after vehicle usage.</p> <p>Since 1970, gasoline evaporative emission control systems have been installed on all new cars sold in California to reduce emissions from the carburetor and fuel tank. Control of heavy duty vehicles began with 1983 model year.</p> <p>More stringent evaporative emission standards have been adopted for 1980 and subsequent model year vehicles. A new certification test procedure will also be used beginning in 1978.</p>	0	0	The 1980 standards are already close to vehicle background levels. Thus further reduction would result in not appreciable benefits.	<p>Stabilized background evaporative emissions, from painted or greased surfaces or vinyl upholstery, are thought to represent 40-50% of the 2 grams per test standard promulgated for post-1980 vehicles. Thus, further reduction would not be significant.</p> <p>17</p>
o Promote use of new or modified fuels.	The modification of fuels has been and continues to be investigated in an effort to come up with an efficient non-polluting fuel. Much experimentation has also been done on the use of alternative fuels such as methanol, hydrogen, and other types of fuels.	-	-	Not Applicable	Since new technological developments in emission control is a result of more stringent emission standards, this measure may be a result of the proposed control measure to reduce emission standards by 50%. Thus the effect would be comparable.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
o Promote use of alternative power sources.	The development of non-polluting power sources has progressed rapidly over the last 5-10 years. Unfortunately there has not been a strong push for mass producing any of these engine types.	-	-	Not Applicable.	Same rationale as for "new or modified fuels."
o Emission standards for other mobile sources.	This would include the adoption of emissions standards for mobile sources such as construction equipment, locomotives, ships, or recreational vehicles.	-	-		Emissions from off-highway mobile sources for 1985 are 50.3 t/d for HC, 73.7 t/d for NO _x , and 322.6 t/d for CO, and for 2000 75.4 t/d, 94 t/d and 389.3 t/d, respectively. Staff believes that these sources may be controllable, but there does not seem to be any available information as to the extent of this control. Thus this measure was dropped at this time due to lack of adequate information, but should be looked at in future updates of the plan.

-76-

EST. HYDROCARBON
EMISSION REDUCTIONS
(Tons/Day)

1985 2000

RECOMMENDATION	DESCRIPTION		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
Traffic Engineering Improvements	Traffic flow can be improved by a number of small projects which would redesign intersections or small street segments. However, if overall capacity were increased, and more trips generated, there could be a negative air quality effect.	Negligible	- Emissions vs. Speed Curves	This measure was dropped in the first screening because it would affect only a small portion of travel, and any air quality effects would likely be insignificant. A quantitative analysis was not conducted.
Off-Street Freight Loading	Zoning regulations would specify off-street freight handling, which would improve traffic flow and hence air quality.	Negligible	- Emissions vs. Speed Curves	The improved flow would have very little effect on oxidant precursors. Thus this measure was dropped in the initial screening without qualification.

B. REDUCE PEAK PERIOD TRAFFIC VOLUMES

Much of the peak oxidant problem can be traced to emissions generated during the morning hours. This is due to the time required for photochemical reactions to take place. Any reduction or spreading of these early morning emissions could possibly reduce the intensity or shift the location of peak oxidant concentrations. However, current knowledge of oxidant formation indicates that a very large shift in time would be required and moreover the measures in this category would be difficult to implement to the degree necessary to have this significant effect.

171

1. Staggered Work Hours	This program would shift the daily work schedule so that all employees would not arrive and leave at the same time. This could take the form of "staggered hours," where subgroups of a total work force operate on a fixed schedule, or "flex-time," where employees are given the option of determining their own hours within certain limits. This measure could improve air quality by a) reducing congestion, b) spreading early morning emissions, and c) providing employees with an opportunity to adjust their schedules to accommodate other modes of travel.	Negligible	- Previous studies and MTC staff judgement	This measure was eliminated at the initial screening because it would redistribute auto trips, rather than eliminate them. Although the air quality benefits would be slight, it may be desirable to implement this strategy for other reasons, such as reduction in congestion.
-------------------------	---	------------	---	--

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Four Day Work Week	The standard work week would be shortened to four days, with the work day lengthened and/or the weekly hours worked shortened. One-fifth of the commute travel could be eliminated, but the additional leisure time would probably generate other recreational or shopping trips.	Negligible	-	Previous studies and MTC staff judgement	Because of the potential for additional trips, it was felt that this measure would have only a small effect on air quality, and it was therefore eliminated during the initial screening.
Off-Peak Freight Delivery	Freight deliveries would be prohibited during peak periods. This would both reduce peak period traffic and also improve traffic flow by removing the slower vehicles and the trucks stopped while loading.	Negligible	-	Previous studies and MTC staff judgement	Only a small percentage of regional travel would be affected by this measure, and so any air quality improvement would be virtually undetectable. This measure was therefore dropped from further consideration during the initial screening.

II. MEASURES TO REDUCE VEHICLE USE

A. MEASURES TO RESTRICT VEHICLE OWNERSHIP

This strategy is designed to reduce travel by limiting the number of vehicles.

Additional License Fee.	This measure could take a number of forms. It could be a tax increase on all cars, or one which would put a progressively heavier tax on the more polluting cars. Another alternative would be to tax second or third cars in a household and so reduce mobility.	Negligible	-	Previous studies and MTC Staff judgement	Although this measure is appealing from an implementation standpoint, at least one study* has indicated that an annual fee would not be a significant factor in a decision to own or drive a car, unless the fee was extremely high. This measure was thus dropped in the initial screening.
-------------------------	---	------------	---	--	--

*R.H. Pratt Associates, Inc., "Transportation Controls for Air Quality Improvements in the National Capitol Region," October 1976.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Registration Limits.	Instead of taxing vehicles with higher pollution potential, this measure would set limits on the numbers of such vehicles which could be registered. The EPA promulgated TCP proposed a ceiling on motorcycle registrations, but this measure was dropped in final version.	Negligible		Previous studies and MTC Staff judgement	The implementation and equity problems of this measure are formidable. Because of this, the program could not be set up at a scale which would have a significant effect on air quality. This measure was eliminated during the initial screening.

B. MANAGEMENT OF AUTO ACCESS

This strategy would discourage auto use by restricting the areas where autos can travel or park.

Better Enforcement of Parking Regulations.	There are many current parking regulations which, if enforced, could discourage certain auto trips. Notable among these are the restrictions on long-term parking which could persuade some commuters to take transit. Other actions, such as enforcement of truck loading zones, could result in a smoother flow of traffic.	Negligible	MTC staff judgment	Because staff believed that the current number of violators was relatively low, the resultant effect in air quality would be small. However, this measure could be effective in jurisdictions where enforcement is currently lax. The measure was eliminated during the initial screening.
Limit Number of Parking Spaces.	The intent of this measure is to reduce the available parking and so limit the number of autos which can effectively use the controlled area. There are two implementation options: (a) limit the construction of new parking facilities, and (b) cut back the number of parking spaces already available.	~ 0.4	Travel Model Analysis	The effect of freezing parking in the CBD's was investigated. Although this measure is effective, it was not included because of the potential for inequity between the large downtown areas and the smaller cities. However, it does remain a possible option.
Prohibit On-Street Parking During Peak Hours.	This measure is designed to improve air quality primarily by improving the flow of traffic. It also serves to discourage certain trips since it limits the available parking.	Negligible	MTC staff judgment	This measure was not pursued since it is currently practiced by the major cities in their CBD's.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Area License	A special license would be required to bring a car into certain designated areas. This would encourage a shift to other modes.	Variable		Previous studies and MTC staff judgement	<p>In the past few years there has been increased interest throughout the world in the possibility of imposing user charges to discourage automobile travel in major urban areas. Singapore instituted a program which has been successful but no cities in Europe or North America have tried this concept. A similar type of program was under discussion in Berkeley but was not pursued. Although congestion pricing would certainly be effective in reducing auto-related emissions, this measure was eliminated during the initial screening because of equity problems, implementation problems and public acceptability. It was felt that a similar effect could be obtained, at least in the CBD's, by increasing long-term parking rates.</p>
Auto Free Zones	This measure involves the designation of areas within a city (e.g., CBD's where vehicles are prohibited, with the exception of buses, taxis, and emergency vehicles). This technique can result in an improved pedestrian environment and would encourage people to use transit for the entire trip. To develop traffic, necessary freight movements, improved transit access, and, in some cases, parking structures on the fringes. This concept has proved successful in a number of cities, most in Europe. In the U.S., the major examples of such zones have been shopping malls.	~ 0.1	*	Travel Model Analysis	<p>An area within the San Francisco CBD was analyzed as a potential auto control zone. This roughly corresponds to the area recommended in the revisions to the Transportation Element of the San Francisco General plan.* This measure was recommended in the draft AQMP. During the public review of the plan, this measure was deleted and recommended for further study. The City of San Francisco is initiating such a study in July, 1978.</p> <p>*Adopted by the San Francisco City Planning Commission. Resolution No. 7657, January 20, 1977.</p>

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Gas Rationing	This is generally considered the "ultimate" measure. The supply of gasoline is limited in an effort to cut travel and thus pollutant emissions. This measure would have significant administrative problems.	Variable	Joint Technical Staff estimate	This measure was not considered for inclusion in the draft AQMP because of the significant administrative problems and public acceptance problems which would surface. Overall fuel rationing has been suggested as an alternative to gas rationing in an effort to spread the burden over all segments of the economy. It should be noted that since autos will constitute only 15% of regional hydrocarbon emissions in 1985, a 20 percent cutback in gasoline availability would reduce regional hydrocarbon emissions by approximately 23 tons.	

C. MEASURES TO INCREASE COST OF AUTO USE

Another way of discouraging auto use is to increase the cost of auto commuting relative to transit or carpooling. However, it generally takes a fairly large increase to effect a significant shift to transit. The more effective pricing strategies are those which serve as daily visible reminders of the real costs of auto commuting.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Road Pricing Techniques	This measure could be implemented in two distinct ways. In one, a fee would be charged for the use of certain roads. This is similar to a toll, except that it is more widespread and would likely not be collected at a tollbooth. Instead, some system of in-car meters or electronic scanning devices might be used as automatic billing devices. The second form is a congestion toll, where the rates would increase with the level of congestion.	Negligible		Previous studies and MTC staff judgement	These measures have not yet been tried as air quality strategies. The technology is not readily available for the first and the second is still fairly new and untested. For this reason, and because of problems in public acceptability, this measure was dropped in the initial screening. The discussion included under measure B(4) is also applicable to this measure.
Increased Parking Costs	The purpose of this measure would be to discourage auto use by increasing the overall commute cost via additional parking charges. A special parking tax of 35 percent, to be levied on all vehicles parking between 6 and 10 a.m., has been proposed.	~ 0.3	*	Travel Model Analysis	The 6-9 a.m. period was selected to minimize the additional burden on those driving for non-work purposes. This measure was recommended in the draft AQMP. During the public hearings and plan review process, however, this measure was deleted. A major concern expressed was its questionable effectiveness and the competitive advantage of those lots not imposing the parking tax.
Minimum Parking Fee at Large Shopping Center	Most of the measures that were considered focused on the work trip. Other trips, such as shopping, are important in the formation of air pollution but are not as susceptible to diversion to transit. However, many of these trips are made to purchase only one or two items. If the shopper were to consolidate these single trips	See Description and Comments			Staff was unable to quantify the effectiveness of this measure because of the lack of experience with this type of action. However, we estimate that shopping trips in 1985 will generate 53 tons of HC, 826 tons of CO, and 39 tons of NOx daily. This is significant, and therefore this measure was recommended.

EST. HYDROCARBON
EMISSION REDUCTIONS
(Tons/Day)

1985 2000

RECOMMENDATION	DESCRIPTION	1985	2000	BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
(Continuation of previous Recommendation)	into one or two weekly trips, the air quality effect could be important. To encourage this consolidation of trips, a minimum 50¢ parking fee at shopping centers that maintain over 500 parking spaces was proposed.				
Eliminate Free Employee Parking	Employers located outside the CBD's virtually always provide their employees with free parking. To encourage these employees to shift to transit or carpools, this measure specifies a \$1.00 parking fee be levied at all employee lots of 500 or more spaces.	~ 0.9	*	Travel Model Analysis	Although these reductions are relatively high, it was felt that the current lack of transit access to many industrial areas would be a hardship. Therefore, this measure is not recommended at this time.
Additional Gasoline Tax	The gas tax would be raised to reduce the demand for vehicular travel. The extra revenue would be used to finance transit improvements or other non-auto alternatives. Unfortunately, the energy crisis of 1974 demonstrated that, even with a rather large increase in cost, the use of autos did not decrease significantly. This experience showed that a 10% increase in pump price facing the consumer would cut the demand probably 1.5%. In the long run, the application of this measure would probably produce a shift toward smaller, more fuel-efficient cars. The imposition of this measure raises questions of equity, since the poor and those not having access to transit would be penalized most severely.	< 0.1	-	Travel Model Analysis	A 15¢/gal increase in the gas tax would reduce HC emissions in 1985 by less than 0.1 ton/day. The CO reduction was 0.8 tons/day with NOx reduced less than 0.1 ton/day. This measure was eliminated during the secondary screening.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Increased Tolls.	Bridge tolls would be increased to reduce the volume of autos using the facility and to generate revenue which could be used to finance improvements in the transit system. MTC was recently given authority over the level and use of tolls on the trans-bay bridges. Tolls on the Bay, San Mateo, and Dumbarton bridges were recently raised to 75¢. The Golden Gate Bridge District has just adopted a \$1.00 toll.	~ 0.2	*	Travel Model Analysis	A peak toll of \$1.25, with an off-peak toll of \$1.00, would reduce HC by 0.2 tons/day, CO by 3.1, and NO _x by 0.2 (1985 emissions). In addition, over \$12 million additional revenues would be generated annually, which could be used for transit improvements. This measure was recommended in the draft AQMP. During the public hearings and plan review process, however, this measure was deleted. A major factor in deleting the measure was the inequity of its impacts.
"Smog Charges."	This measure would assess an additional charge on the auto driver for the pollution generated by the automobile, thus encouraging a shift to other forms of transport or to less polluting cars. The implementation could be done through some of the measures already mentioned, such as the gas tax or registration fee, possibly accompanied by some rebate scheme for those autos with superior emissions control equipment.	Negligible		MTC staff judgment	The effectiveness of this measure was judged to be similar to that estimated for the additional gas tax. An extremely high charge was thought necessary to effect significant reductions in auto use - the measure was therefore eliminated during the secondary screening.

D. MEASURES TO REDUCE THE NEED TO TRAVEL

This strategy is designed to maximize or eliminate unnecessary travel. Unfortunately, the effectiveness and feasibility of these types of measures are uncertain.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Communications Substitutes.	Certain trips could be eliminated by using other means of communication. This could include business trips as well as shopping trips. The technology for visual communications is becoming more available. However, the extent to which the public will adapt to these new systems is uncertain. The rapid growth in electronic communications in the past decade has not reduced the need to travel.	Uncertain, probably negligible		See comments	This measure was eliminated in the initial screening because its proven effectiveness in the near term is doubtful.
Goods Movement Consolidation.	This measure would reduce truck travel by consolidating freight deliveries. Basically, the concept is to have one terminal where the freight is delivered and sorted, and then small trucks would complete the delivery. The measure would thus decrease truck VMT and probably also reduce auto emissions as well by permitting a smoother traffic flow.	Negligible		MTC staff judgement	The effectiveness of this measure would be minimal because of the small percentage of travel that would be affected. The measure was thus dropped in the initial screening.

III. MEASURES TO ENCOURAGE ALTERNATIVE MODES OF TRAVEL

A. INCREASE TRANSIT RIDERSHIP

This set of measures would provide incentives for transit as an alternative transportation mode. For many commuters transit is a viable option, yet additional incentives need to be provided to induce significant diversion from the automobile. The following measures are designed to promote the transit mode.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
		1985	2000		
Fare Reductions	There are a number of variations of this measure. One is to simply reduce or eliminate transit fares. This would probably not be very effective, since the fares throughout the Bay Area are already relatively low. A second option is some form of a monthly pass. This has good potential since it would eliminate the psychological impediment of repeated payments, and so would encourage the diversion of casual trips to transit. A related option is the coordination of transfers between systems.	Negligible	Previous Studies and MTC staff	Because of the current low fare level, further reductions could conflict with regional policy and potentially state law. The monthly pass would probably not have significant air quality effects, but may be a desirable mechanism for encouraging transit ridership.	186
Improved Transit Comfort	This measure seeks to reduce the differences between the auto and transit modes by improving the comfort of transit service. This would be done by providing shelters at bus stops, better security, more comfortable buses, or other amenities.	Negligible	MTC staff judgement	It is believed that improved amenities alone would not significantly influence transit demand. Moreover, most of the existing transit development programs in the Bay Area will involve new, comfortable buses, additional bus shelters and radio communication. Thus, this measure was dropped from consideration in the initial screening.	

EST. HYDROCARBON
EMISSION REDUCTIONS
(Tons/Day)

1985 2000

RECOMMENDATION	DESCRIPTION	BASIS FOR ESTIMATE	COMMENTS AND SCREENING RATIONALE
----------------	-------------	--------------------	----------------------------------

B. ENCOURAGE THE PEDESTRIAN MODE

Provide Pedestrian Amenities

For short trips, walking is frequently the best alternative. Providing amenities such as wider pavements, or moving sidewalks between major activity centers can encourage people to walk for short trips.

Negligible
Previous Studies and MTC
staff judgement

A survey of previous studies indicated that, with the exception of auto-free zones, the provision of these amenities would not produce a significant shift from the auto. Rather, it is the dense land use pattern itself which generally encourages pedestrian activity. Since the auto-free zone was already included as a separate measure, we felt that the provision of these other amenities was not warranted from a strict air quality perspective.

C. MEASURES TO ENCOURAGE RIDE SHARING

Carpooling has good potential as a strategy for reducing vehicle travel. It requires no new capital investment since the cars are already available. It can offer many amenities that transit cannot, such as door-to-door service. Finally, the cost savings are easily perceived by the individual riders.

Toll Reduction
for Carpools

One means of encouraging carpools is to reduce or eliminate the tolls on bridges or other toll facilities. Currently, the trans-bay bridges charge no tolls for carpools during peak hours. The Golden Gate Bridge also allows free passage of carpools.

Negligible

MTC staff judgment

Virtually all bridges now offer free passage to carpools during peak periods. Very little could be done to expand this measure, so it was eliminated during the screening process.

*The effectiveness of these measures was not estimated separately for the year 2000. They were combined with the compact development strategy for evaluation.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATES	COMMENTS AND SCREENING RATIONALE
		1985	2000		
General Policy: Alter regionwide development patterns to reduce automobile travel by means of local and regional policies on land use and urban services.	See Specific Policies and Actions below	Not estimated	24	ABAG land use and MTC transportation models	The reductions in emissions are based on a total population in the region of 5.4 million. If the population were at the higher range projected (6.1 million), the emission reductions shown would be higher, but so would the total from which the reductions would be subtracted.
POLICY A - Extend new development only to those locations with existing sewer and water service or sewer and water service committed in capital improvement programs.					
Action 1 - Local Agency Formation Commissions (LAFCOs) adopt city and special district spheres of influence throughout the region as soon as possible.	Action 2 - LAFCOs adopt the "urban service area" concept for defining urban service commitments and projecting urban land needs for 5, 10 and 20 year periods.			Action 3 - LAFCOs approve annexations and formation of cities and special districts consistent with Action 2 findings on urban service commitments and urban land needs.	Action 4 - Counties and cities enact non-urban zoning outside urban service areas.
Action 5 - Counties and cities enact temporary moratoria on urban zoning and subdivisions outside urban service areas pending the enforcement of non-urban zoning in such areas.					
POLICY B - Restrict development outside urban service areas in areas of critical environmental concern (environmental resources, hazards or amenities).					
Action 6 - Counties and cities enact agricultural zoning or large-lot rural residential zoning (generally one dwelling unit per 40 acre minimum lot size).	Action 7 - Counties and cities initiate, continue or expand programs under the California Land Conservation Act (Williamson Act), the Open Space Easement Act of 1974 and the Z'Berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 outside urban service areas.			Action 8 - Counties and cities establish programs of public land management including acquisition, purchase/leaseback, purchase/transfer of development rights, etc.) for locations outside urban service areas.	
POLICY C - Develop unimproved land within urban service areas where urban services exist or are committed in capital improvement programs.					
Action 9 - ABAG, counties, cities and LAFCOs establish "early warning" inter-agency information exchange programs concerning urban service facility plans at the earliest stages of project planning.	Action 10 - ABAG, counties, cities and LAFCOs expedite plan or project reviews where early information on facilities has been provided, under Action 9.			Action 11 - Counties and cities initiate rezoning and permit preference procedures in locations with existing but unused service capacities (with emphasis on water, sewer, transportation and school services).	

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATES	COMMENTS AND SCREENING RATIONALE
		1985	2000		
POLICY D - Complete, as soon as possible, all needed sewer, water or transportation service improvements within adopted urban service areas.					
Action 12 - LAFCOs review all city, county, or special district sewer, water, or transportation service capital improvement programs and report on priority needs within each urban service area.	Action 13 - ABAG review sewer, water and transportation needs within all urban service areas to determine regionwide priorities among such service needs.			Action 14 - ABAG favorably review applications for State/Federal financial assistance from agencies lacking service capacity within urban service areas, where other existing or committed services have been found by the LAFCO to be capable of accommodating additional development.	
POLICY E - Improve highway, street, road and transit systems consistent with local actions to stage land development.					
Action 15 - Counties and cities enact planning and zoning regulations to stage land development consistent with the scheduling of urban services (including but not limited to "development sequence zoning", "tiered zoning districts", development timing permits, etc.).	Action 16 - Caltrans, MTC, counties, cities, and special districts plan, program, fund and construct highway, street, road and transit improvements consistent with local action to stage land development.				cc 1
POLICY F - Increase housing and job opportunities in existing urbanized areas by encouraging public and private rebuilding into compatibly mixed commercial, industrial and residential land uses.					
Action 17 - Counties and cities initiate and/or expand housing conservation programs in existing urbanized areas.	Action 18 - Counties and cities initiate and/or expand commercial and industrial development and redevelopment in existing urbanized areas.			Action 19 - Counties, cities, and special districts initiate and/or expand incentives to public and private redevelopment in urbanized areas. Emphasis would be on sewer and water facilities, and extensive transit service improvements, but should also include educational and cultural facilities and public safety service improvements where appropriate.	Action 20 - ABAG, counties and cities analyze possible local revenue reforms to provide adequate financial resources to carry out Action 19.
Action 21 - ABAG support State legislation to provide local governments with adequate fiscal resources to carry out Action 19.	Action 22 - ABAG oppose Federal and State legislation that would hamper the ability of local governments to carry out rebuilding programs to increase job and housing opportunities in existing urbanized areas.				

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATES	COMMENTS AND SCREENING RATIONALE
		1985	2000		
POLICY G - Encourage "infill" development of bypassed vacant land within urban service areas.					
Action 23 - Counties and cities undertake planning studies to inventory bypassed land, identify development problems, and resolve questions of best potential use.	Action 24 - Counties and cities adopt necessary changes in zoning and permit procedures to facilitate development of bypassed parcels affected by special conditions.			Action 25 - Service agencies design sewer, water and transportation systems to improve accessibility and service ability of bypassed vacant land in existing urban communities.	
POLICY H - Develop at higher densities within service areas where existing or committed urban service capacities, including transit, can support the higher densities.					
Action 26 - In urban service areas with adequate sewer, water and transit capacities, counties and cities rezone appropriate locations to permit higher densities.	Action 27 - Counties and cities enact ordinances (such as those for planned unit development or cluster zoning) to foster higher densities on appropriate sites.				
POLICY I - Limit development of land within urban service areas where soil, slope, or other conditions can support only low-density development.					
Action 28 - Counties, cities and special districts deny primary urban services to these locations by excluding them from capital improvement programs and design of service systems, and by enactment of hookup moratoria, etc.	Action 29 - Counties, cities, and special districts establish programs of public land management (including but not limited to public land acquisition, purchase/transfer of development rights, purchase/leaseback, etc.) to maintain appropriate sites in open uses.				
POLICY J - Improve the balance of jobs and housing in jurisdictions throughout the region to reduce the necessity for long distance home-to-job travel.					
Action 30 - Cities and counties adopt programs to increase local employment opportunities if a substantial proportion of their residents work elsewhere.	Action 31 - Cities and counties adopt programs to increase local housing opportunities in a price range suitable for their work forces if a substantial proportion of their work forces live elsewhere.			Action 32 - ABAG conduct A-95 and EIR reviews to support local government to improve the balance of jobs and housing in communities throughout the region.	
POLICY K - Mix residential/commercial and industrial development in communities throughout the bay region.					
Action 34 - Counties and cities revise zoning ordinances to allow compatible mixtures of land uses with adequate design or performance standards (including planned unit developments, performance standard zoning, etc.).	Action 35 - Counties and cities expand application of conditional use permits where appropriate.			Action 33 - ABAG support State and Federal funding allocations for facilities and programs offering incentives to economic development or housing development in appropriate jurisdictions.	

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATES	COMMENTS AND SCREENING RATIONALE
		1985	2000		
POLICY L - Discourage new large-scale land development projects that are exclusively commercial, industrial or residential, unless such projects clearly demonstrate that they improve the overall balance of jobs and housing in that city, county, or subregion.					
Action 36 - Counties, cities and LAFCOS deny incorporation or annexation of large-scale development proposals that are exclusively commercial, industrial or residential, unless such incorporation or annexation can be shown to improve the overall balance of jobs and housing in the city, county or subregion.	Action 37 - MTC, the California Department of Transportation and transportation districts deny regional transportation system access or extension to proposed large-scale land development projects that are exclusively commercial, industrial or residential unless such transportation actions can be shown to improve the overall balance of jobs and housing in the city, county or subregion.				
POLICY M - Fund new wastewater and transportation facilities only after areas serviced have taken actions to carry out actions of this plan.					
Action 38 - The State Water Resources Control Board and the Environmental Protection Agency require applicants for wastewater facilities under Section 201 of the Federal Water Pollution Control Act to demonstrate, prior to construction funding, that specific actions (including but not limited to land development regulations, urban service commitments, etc.) have been taken by affected jurisdictions to carry out actions of this plan.	Action 39 - The U.S. Department of Transportation, the California Transportation Commission, the California Department of Transportation and the Metropolitan Transportation Commission require applicants for transportation improvement grants to demonstrate prior to funding for acquisition and construction that specific actions (including but not limited to land development regulations, urban service commitments, etc.) have been taken by affected jurisdictions to carry out actions of this plan.				
POLICY N - Review development proposals for air quality effects and consistency with compact development recommendations in the plan (indirect source review)					
Action 40 - ABAG, BAAPCD and MTC adopt memoranda of understanding and procedures for prompt and thorough joint review of significant development proposals. Review would be conducted for proposals (such as shopping centers, industrial parks, office complexes, etc.) where significant air pollution could result from the project's generation of auto traffic.	Action 41 - BAAPCD adopt permit procedures for application to indirect sources.			Action 42 - ABAG encourage and support local government efforts to determine direct and indirect effects on air quality in making local land use decisions. Such support shall include technical assistance and analysis.	Action 43 - ABAG encourage and support local government efforts to reduce adverse effects of development proposals on air quality, including but not limited to assistance in identifying and implementing mitigation measures for adverse impacts of municipal wastewater facilities and transportation improvement programs.

RECOMMENDATION	DESCRIPTION	EST. HYDROCARBON EMISSION REDUCTIONS (Tons/Day)		BASIS FOR ESTIMATES	COMMENTS AND SCREENING RATIONALE
		1985	2000		
POLICY O - Adopt financial programs to support local and regional agency actions and private sector development actions consistent with policies in this chapter to reduce home-to-work distance and auto dependency.					
Action 44 - ABAG, counties and cities support State and Federal legislation to provide subventions and other fiscal assistance to cities and counties carrying out development policies to achieve air quality standards.	Action 45 - ABAG, counties and cities support State and Federal legislation providing tax incentives to the private sector for rebuilding and development within existing urbanized areas.			Action 46 - ABAG, counties and cities support State and Federal legislation providing financial support to local and regional agencies for carrying out development management policies and reviews to achieve air quality standards, especially to mitigate adverse impacts on low- and moderate-income households.	
POLICY P - Adopt a coordinated regionwide program for carrying out actions for attainment and maintenance of air quality standards through development and land use management actions by cities, counties, special districts, ABAG, BAAPCD, MTC, LAFCOs and other appropriate local and regional agencies.					
Action 47 - ABAG identify, within six months of General Assembly adoption of an initial air quality maintenance plan, which implementing actions are being carried out by local and regional agencies.	Action 48 - ABAG include, in each annual revision of the AQMP, agreements reached among local and regional agencies for carrying out land use and development management actions included in the initial AQMP.			Action 49 - ABAG include, in each annual revision of the AQMP, an identification of actions not being carried out by all appropriate agencies, and which actions are to be carried out by appropriate agencies by the next annual revision of the AQMP.	

continued maintenance of the oxidant standard once attained. Submission of a plan that does not show long-term maintenance of the photochemical oxidant standard once met is thus not acceptable. Therefore the no action alternative is not feasible.

In addition to the compact development alternative (land use management/development controls) originally proposed for the AQMP but not recommended in the AQMP, a total of seven substitute measures for maintenance of the oxidant standard through the year 2000 were considered for identification and inclusion in the AQMP portion of the EMP. The alternative measures not selected were:

- o Increase gas tax
- o Implement roadway pricing
- o Parking strategies

Based on the identified impacts associated with the seven measures, the Executive Board selected four as meriting identification for further analysis.

The seven maintenance measures considered were taken from Table 3. Those not selected and all other alternatives on the table remain as alternatives to those identified or selected as maintenance measures. Reasons for rejection are noted on the table.

Alternative Institutional Arrangement for Implementation

Alternative institutional arrangements for implementing the AQMP are not feasible. The Clean Air Act requires that adequate regulatory authority exist to implement the plan. Adequate authorities currently exist to implement the plan. The California Air Resources Board, the Bay Area Air Pollution Control Board, California Department of Transportation, Metropolitan Transportation Commission, ABAG and other regional and local governments can implement the actions recommended in the plan.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The policies of the AQMP would have significant benefits for the maintenance and enhancement of long-term productivity. All policies involve some actions that would result in substantial energy savings.

The substitute maintenance measures would have significant benefits for the maintenance and enhancement of long-term productivity. One result of new engine technologies and pollution controls may be improved fuel efficiencies. The attendant energy savings will contribute to long-term productivity of resource supplies (oil). Transit improvements reducing growth in vehicle miles traveled (VMT) by automobile are estimated to result in noted energy savings. Recommendations that result in fuel switching from gasoline to diesel and additional transit (using diesel power) may slightly increase consumption of diesel fuel in the short-term while in the long-term fuel efficiency and reduced VMT/passenger should compensate for the short-term increases. Improved engine technologies may result in the use of less

specialized fuels, which would contribute to some degree to the maintenance and enhancement of long-term productivity of these resources.

Any short-term effects should be considered in relation to the maintenance of ambient air quality. The purpose of these measures is to ensure long-term maintenance of the photochemical oxidant standard once met.

ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The policies of the AQMP should not result in irreversible changes to the environment. Implementation of these actions would generally reduce or eliminate the significant irreversible environmental changes that would result if air quality is not improved (e.g. deterioration of physical resources such as vegetation, and public health). Federal air quality standards seek, in part, to protect and enhance environmental quality.

THE GROWTH INDUCING IMPACTS OF THE PROPOSED ACTIONS

The Air Quality Maintenance Plan should not have growth inducing effects.

IMPACTS OF THE ENVIRONMENTAL MANAGEMENT PLAN

DESCRIPTION OF THE PROPOSED PROJECT

The Environmental Management Plan includes four management plans for water quality, water supply, solid waste and air quality. It also contains institutional/financial and legislative recommendations to carry out the plan. The policies and actions recommended to carry out the plan are described in Chapters III through IX of Volume I of the EMP. They are also noted in this EIR.

SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

The overall impacts of the EMP are discussed in Chapter II of Volume I of the EMP. The discussion summarizes the environmental, institutional/financial, economic and social impacts.

This discussion assesses the significant environmental effects of the EMP as required by CEQA and NEPA.

The EMP addresses four major environmental issues facing the Bay Area. It defines the problems and indicates what steps are necessary to solve them. The recommended policies and actions outline a plan of action that meets national and State requirements for clean air and water and for managing solid waste. It also describes a process to ensure continued integrated environmental planning.

As an integrated environmental management plan, it will have significant environmental effects. Implementation of the actions recommended will result in improved water quality, wise and efficient use and management of the region's water supplies and solid wastes and meeting and maintaining the Federal oxidant standard.

Improved water quality would allow the region to benefit from a renewed marine economy, improved recreational opportunities and the reuse of reclaimed wastewater.

Improved management of existing water supplies and conservation and reuse actions could reduce the need to develop additional water supplies while still ensuring provision of water sufficient to meet the needs of the region.

Solid waste management actions will slow the consumption of diminishing resources and conserve energy. The actions will tend to make solid waste a resource rather than a problematic by-product which must be disposed of in landfills with attendant loss of the resource value. Improved solid waste management means more land available for recreational and development purposes.

Reducing the health hazards posed by air pollution will affect many people. Air quality actions will result in substantial energy savings. Benefits to agriculture and other plant communities are other significant effects of the air quality recommendations. Benefits to the natural/physical environment would also result from the air quality recommendations.

ANY SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED AND MITIGATION MEASURES PROPOSED TO MINIMIZE THE SIGNIFICANT EFFECTS

The EMP describes the actions necessary to meet key Federal and State air and water quality standards and solid waste management objectives. As an integrated plan for managing the physical environment, it is virtually self mitigating. Meeting air quality standards may have water quality and solid waste effects. Meeting solid waste objectives may have effects on water quality and air quality. Managing water supply and meeting water quality standards and objectives may have air quality and solid waste effects. Because the EMP is the result of an integrated planning process, the impacts of one plan on another were identified and the plans were made consistent. Many significant (adverse) environmental effects of a plan may be mitigated by another plan(s) as described throughout this document when discussing the significant environmental effects.

Certain of the policies recommended would ultimately result in construction of facilities (e.g. wastewater treatment facilities, demonstration projects for resource recovery, wastewater solids projects, reclamation projects). As the actions are carried out by State, REgional and local governments, those agencies will become Lead Agencies under the definitions of CEQA. At that point, the site specific projects proposed to carry out the actions will be assessed for their significant environmental effects.

ALTERNATIVES TO THE PROPOSED ACTION

The major alternative to the EMP in its entirety is no action. No action is not feasible. As the agency designated to prepare the EMP, ABAG is obligated by law to do so. Section 208(b)(1) of the FWPCA requires that an areawide waste treatment management plan be completed not later than two years after the planning process is in operation. Section 208 also requires consideration of solids management in the areawide management plan. SB 424 requires the preparation of a regional solid waste management plan and the Resource Conservation and Recovery Act also supports regional solid waste management plans. The air quality portion is required by law as a result of the designation of ABAG to join with other State and Regional agencies to prepare such a plan.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Local short-term uses of the environment would be necessary to carry out some of the recommendations in the EMP. However, the recommendations collectively would contribute to the maintenance and enhancement of long-term productivity.

ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Certain of the policies of the EMP may ultimately result in irreversible

changes to the environment. The policies are those that at some point in the next twenty years would result in construction of facilities. As the actions proposed are carried out by State, Regional and local agencies, those agencies will become Lead Agencies under the definitions of CEQA. At that point, the site specific proposals to carry out the policies and actions will be assessed and the irreversible changes identified.

The expected environmental improvements associated with implementing the Environmental Management Plan serve to reduce or reverse many significant irreversible environmental changes that would result without the plan.

THE GROWTH INDUCING EFFECTS OF THE PROPOSED ACTION

The EMP should not have growth inducing effects. The plan is internally consistent. The individual management plans are consistent with one another and are mutually supportive. The wastewater treatment facilities list is structured to accommodate development in the region over the next twenty years. Water supply, conservation and reuse policies will ensure adequate water for development; the solid waste proposals will handle the solid waste generated and the mobile source and transportation controls will ensure mobility without deterioration of air quality. Viewed as a whole, the Environmental Management Plan for the San Francisco Bay Region is a sound plan for managing the region's major environmental resources now and in the future.

FINDINGS UNDER SECTION 15088 OF THE "STATE EIR GUIDELINES"

Water Quality Management Plan

The significant environmental effects identified in the Water Quality Management Plan are:

- 1) increased volumes of sewage solids (sludge) to be disposed of/used and the effects of disposal/use
- 2) construction-related and other environmental effects associated with treatment facilities

Significant environmental effects identified in the EIR are intended only to describe the nature of impacts that could be expected to be associated with a type of project and the general nature of potential mitigation measures available to the responsible public agency which may include various aspects of implementation of the EMP (e.g. the Solid Waste Management Plan/Regional Wastewater Solids Plan, Surface Runoff component of Water Quality Management Plan especially County Surface Runoff Control Plans, Water Supply Management Plan, Air Quality Maintenance Plan).

This public agency does not recommend the construction of any site-specific project and nothing in the EMP guarantees construction of any specific project. Other public agencies will be responsible for proposing site-specific projects and mitigating significant environmental effects at the point in time such projects are proposed.

Accordingly, ABAG finds under Section 15088(a)(1) and (2) of the "State EIR Guidelines" with respect to the significant environmental effects identified in the Water Quality Management Plan that:

- 1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects thereof as identified in the final EIR.
- 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency(s) and not ABAG. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

Factual evidence supporting these findings is contained in the EMP and the Final Environmental Impact Report.

Water Supply Management Plan

The significant environmental effects identified in the Water Supply Management Plan are:

- 1) construction-related and other environmental effects associated with supply development and distribution and wastewater reclamation facilities

- 2) increased volumes of sewage solids (sludge) to be disposed of/used and the effects of disposal/use

Significant environmental effects identified in the EIR are intended only to describe the nature of impacts that could be expected to be associated with a type of project and the general nature of potential mitigation measures available to the responsible public agency which may include various aspects of implementation of the EMP (e.g. Water Quality Management Plan en toto and in particular the Surface Runoff component, Solid Waste Management Plan/Regional Wastewater Solids Plan).

This public agency does not recommend the construction of any site-specific project and nothing in the EMP guarantees construction of any specific project. Other public agencies will be responsible for proposing site-specific projects and mitigating significant environmental effects at the point in time such projects are proposed.

Accordingly, ABAG finds under Section 15088(a)(1) and (2) of the "State EIR Guidelines" with respect to the significant environmental effects identified in the Water Supply Management Plan that:

- 1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects thereof as identified in the final EIR.
- 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency(s) and not ABAG. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

Factual evidence supporting these findings is contained in the EMP and the Final Environmental Impact Report.

Solid Waste Management Plan

The significant environmental effects identified in the Solid Waste Management Plan are:

- 1) construction-related and air and water quality effects associated with resource recovery, energy recovery facilities and sewage solids facilities
- 2) disposal/use effects of sewage solids management

Significant environmental effects identified in the EIR are intended only to describe the nature of impacts that could be expected to be associated with a type of project and the general nature of potential mitigation measures available to the responsible public agency which may include various aspects of implementation of the EMP (e.g. the Water Quality Management Plan en toto and in particular the Surface Runoff component, the Water Supply Management Plan and the Air Quality Management Plan).

This public agency does not recommend the construction of any site-specific project and nothing in the EMP guarantees construction of any specific project. Other public agencies will be responsible for proposing site-specific projects and mitigating significant environmental effects at the point in time such projects are proposed.

Accordingly, ABAG finds under Section 15088(a)(1) and (2) of the "State EIR Guidelines" with respect to the significant environmental effects identified in the Solid Waste Management Plan that:

- 1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects thereof as identified in the final EIR.
- 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency(s) and not ABAG. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

Factual evidence supporting these findings is contained in the EMP and the Final Environmental Impact Report.

Air Quality Management Plan

Measures to meet and maintain the Federal oxidant standard are required by the Clean Air Act Amendments. Other public agencies will be responsible for implementing these controls. Measures to protect the environment taken by regulatory agencies are generally not subject to CEQA as they are categorically exempt.

Significant environmental effects identified in the EIR are intended only to describe the nature of impacts that could be expected to be associated with a type of project and the general nature of potential mitigation measures available to the responsible public agency which may include various aspects of implementation of the EMP.

Certain of the stationary source controls may have significant environmental effects due to their energy consumptive nature (e.g. water-based coatings and solvent incineration). These effects may be offset by other stationary controls and other AQMP controls which result in energy savings. Moreover, implementation of the stationary source control program is the responsibility of another public agency, the Bay Area Air Pollution Control District. Actions taken by regulatory agencies, such as the BAAQMD, to protect the environment are categorically exempted from the requirements of CEQA.

Other significant environmental effects would be associated with additional transit service and identified maintenance measures such as off-highway mobile source controls. Implementation of these controls is the responsibility of the Metropolitan Transportation Commission, transit operating districts, and the California Air Resources Board. Additional transit service will require

increased consumption of diesel fuel. This effect cannot be mitigated although an offsetting effect is a reduction in gasoline consumption from reduced vehicle miles traveled by car and the air quality improvements. Those agencies whose actions are not categorically exempt from CEQA would be required to identify and mitigate significant environmental effects.

Another significant environmental effect of additional transit service and off-highway mobile source controls is increased levels of carbon monoxide and/or oxides of nitrogen and sulfur. As part of the continuing planning process, control plans for meeting and maintaining the remaining Federal and State ambient air quality standards will be developed as necessary. Those plans when prepared and adopted will be implemented by other public agencies. Those agencies whose actions are not categorically exempt from CEQA would be required to identify and mitigate significant environmental effects, as applicable.

Accordingly, ABAG finds under Section 15088(a)(1)(2) and (3) of the "State EIR Guidelines" with respect to the significant environmental effects identified in the Air Quality Management Plan that:

- 1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant environmental effects thereof as identified in the final EIR.
- 2) Such changes or alterations are within the responsibility and jurisdiction of another public agency(s) and not ABAG. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- 3) Specific economic, social or other considerations make infeasible mitigation measures or project alternatives.

Factual evidence supporting these findings is contained in the EMP and the Final Environmental Impact Report.

AGENCIES, ORGANIZATIONS AND INDIVIDUALS COMMENTING ON THE DRAFT EIR AND THE SUPPLEMENT TO THE DRAFT EIR

Union Oil Company of California
Chevron U.S.A. Inc.
California Manufacturers Association
East Bay Municipal Utility District
McCutchen, Black, Verleger & Shea on behalf of Western Oil and Gas Association
Stephen L.Brown, SRI International
California Council for Environmental and Economic Balance
California Department of Transportation
San Jose Chamber of Commerce
Board of Supervisors of Contra Costa County
California Institute of Public Transportation
Charles Kinney, Associated Building Industry of Northern California
Bay Area Rapid Transit District
Craig Hermsmeyer
Governor's Office of Planning and Research

PREPARATION OF THIS DOCUMENT

This Environmental Impact Report was prepared by the staff of the Association of Bay Area Governments in cooperation with the Bay Area Air Pollution Control District, Metropolitan Transportation Commission, San Francisco Bay Regional Water Quality Control Board and Counties of the Bay Area with assistance of these agencies: California Department of Health, California Department of Transportation, California Air Resources Board, Army Corps of Engineers, Council of Bay Area Resource Conservation Districts, Governor's Office of Planning and Research, Lawrence Berkely Laboratory, Lawrence Livermore Laboratory, San Francisco Bay Conservation and Development Commission, State Water Resources Control Board, State Solid Waste Management Board, Wastewater Solids Study and various private consulting firms.

FOOTNOTES

1. Dee, Norbert et al, Final Report on Environmental Evaluation System for Water Resource Planning, Prepared by Battelle-Columbus Laboratories for the U.S. Department of the Interior, Bureau of Reclamation, January 1972.

The Resources Agency, State EIR Guidelines, Appendix D, State of California, California Administrative Code, Title 14, Division 6, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act of 1970 (including amendments adopted September 30, 1976).

2. Leopold, Luna B. et al, A Procedure for Evaluating Environmental Impacts, U.S. Geological Survey, Circular 645, 1971.
3. Sorenson, Jens C., A Framework for Identification and Control of Resource Degradation and Conflict in the Multiple Use of the Coastal Zone, University of California, Department of Landscape Architecture, 1971.
4. Association of Bay Area Governments, Provisional Series 3 Projections: Population, Housing, Employment, and Land Uses in the San Francisco Bay Region, March 1977.
5. J. B. Gilbert and Associates, Water Conservation, Reuse and Supply Report for the Bay Region, November 1977.

APPENDIX A

CANDIDATE CONTROL MEASURES FOR THE ENVIRONMENTAL MANAGEMENT PLAN

PRELIMINARY CANDIDATE CONTROL MEASURES FOR MUNICIPAL AND INDUSTRIAL DISCHARGES, NON-POINT SOURCES OTHER THAN URBAN RUNOFF AND WATER CONSERVATION, REUSE AND SUPPLY

INTRODUCTION

The purpose of this memorandum is to provide a preliminary listing of candidate control measures for use in the evaluation and assessment and public participation tasks. It is recognized that, due to the complex interrelationships between plan elements, control measures in one element, municipal facilities for example, may duplicate or otherwise influence control measures for another element such as water conservation, reuse and supply. In addition, because substantial efforts have been made already in the field of water pollution control some of the control measures listed are in the process of implementation.

MUNICIPAL WASTEWATER FACILITIES PLAN CONTROL MEASURES

The candidate control measures for municipal wastewaters fall into three groups.

- A. Measures to reduce wastewater volume and pollutant content at the domestic or commercial source.
- B. Measures to treat wastewater and reuse or dispose of wastewater effluent.
- C. Measures to control land use.

A Measures to reduce wastewater volume and pollutant content

1. Restrict availability of toxic materials. Restrict the commercial availability of inessential toxic chemicals for household use.
2. Control the use of household appliances. Prohibit or restrict the use of household appliances that adversely influence wastewater strength and volume e.g. garbage grinders, water softeners.
3. Reduce wastewater volumes by water conservation. Reduce wastewater generation by adopting water conserving practices such as low flush volume toilets, faucet aeration, etc.

4. Control infiltration and inflow. Control and reduce excessive infiltration and inflow into sewage collection facilities.
5. Adopt household water reuse practices. Install household plumbing systems that allow reuse of lightly polluted household wastewaters as sources of landscape irrigation water.
6. Conduct public awareness programs. Conduct education and information programs to increase public awareness of wastewater disposal problems.

B Measures to treat, reuse and dispose of wastewaters

1. Construct, enlarge and improve wastewater treatment facilities. - Construct, enlarge or improve community or sub-regional treatment facilities.
2. Construct effluent dispersion facilities. - Construct facilities to convey treated effluent to suitable receiving water bodies and effect adequate dispersion.
3. Construct reuse facilities. - Construct facilities to convey effluent to areas with a demand for reclaimed water.
4. Adopt measures to force/encourage wastewater reuse. - Adopt measures that will force or encourage the use of reclaimed water whenever it is available and is an adequate substitute for an existing water use.
5. Construct storage facilities to prevent combined sewage overflows. - Construct storage facilities within combined sewage collection systems to reduce peak flows at overflow locations.

C Measures to control land use

1. Control development patterns. - Encourage compact development to reduce the need for sewage collection facilities.
2. Relate zoning to effectiveness of individual wastewater treatment systems. - Relate zoning and permissible lot sizes to soil or other conditions that determine the effectiveness of individual waste treatment systems.
3. Prohibit new development. - Prohibit new development in areas where wastewaters cannot be disposed of without unacceptable damage to environmental values.
4. Restrict new development. - Restrict new development in areas where existing arrangements for sewerage service do not maintain compliance with waste discharge standards.

INDUSTRIAL DISCHARGE PLAN CONTROL MEASURES

The candidate control measures for industrial discharges are of a regulatory nature.

1. Prohibit discharges in certain areas. - Prohibit discharges to certain areas of bay and ocean where they are incompatible with other beneficial uses.
2. Impose more stringent discharge requirements. - Impose more stringent requirements on discrete industrial wastewater discharges to upgrade effluent quality.
3. Impose more stringent pre-treatment requirements. - Impose more stringent pre-treatment requirements on non-discrete industrial discharges to eliminate difficult-to-treat pollutants from the municipal sewage system.

OTHER NONPOINT SOURCE CONTROL MEASURES

The candidate control measures for other non-point sources of pollutants are described with reference to each pollutant source.

A Agriculture (Crops)

1. Adopt more efficient irrigation practices. - Adopt irrigation practices that allow water applications to be closely adjusted to crop and soil leaching needs in order to minimize return flows.
2. Adopt soil conservation practices. - Adopt practices that reduce soil erosion, such as contour farming, conservation-oriented crop rotation systems, and crop residue management.
3. Control agricultural chemical application rates. - Control closely application rates of fertilizers, pesticides and herbicides to minimize quantities of chemicals available for flushing into the ground or surface waters.
4. Restrict use of agricultural chemicals. - Restrict the use of not-readily degradable pesticides and herbicides.
5. Collect and treat irrigation return flow. Collect return flows from large areas in agricultural drains and manage as point sources of pollutants.

B Agriculture (Animal Husbandry)

1. Adopt runoff management practices. - Adopt practices that minimize generation of polluted runoff at feedlots and dairies by recycling wash waters, grading around manure stockpiles, etc.
2. Collect and treat polluted runoff, wash water, etc. - Collect polluted runoff and manage as a point source of pollutants.
3. Restrict animal access to watercourses. - Fence streams to prevent uncontrolled animal watering.
4. Adopt range management practices. - Adopt range management practices that prevent over-grazing and soil erosion.

C Forestry

1. Adopt soil-conserving harvesting practices. - Adopt harvesting practices that do not denude the harvested area of all runoff retaining vegetation.
2. Establish performance standards for logging haul roads. - Establish design criteria for logging haul roads that embody measures to prevent soil erosion.
3. Revegetate graded areas. - Seed and replant graded areas to rapidly reestablish vegetative cover.
4. Construct temporary sediment traps. - Construct temporary sediment traps downstream of logging activities to trap and remove sediment.

D Mining and Construction

1. Adopt runoff management practices. - Provide ditches, berms and conduits to route runoff around exposed cut and fill slopes and mine tailings.
2. Construct sediment traps. - Provide settling basins downstream of construction or mining sites to trap and remove sediment.
3. Revegetate graded areas. - Seed graded areas to rapidly re-establish vegetative cover.
4. Adopt hazardous material management practices - Adopt procedures for the safe disposal of waste materials from construction activities e.g. waste oil and fuel, asbestos-containing compounds, paints, etc.

5. Restrict slope and drainage practices. - Develop codes restricting maximum cut and fill slopes and establishing drainage requirements.

E Individual Waste Disposal Systems

1. Restrict the use of septic tanks. - Prohibit the use of septic tanks/leach fields in areas where soil type and topography make them functionally ineffective.
2. Establish/design criteria for septic tanks. - Establish design criteria for septic tanks and leaching fields that are logically related to soil permeability, slope, etc.
3. Establish septic tank maintenance and inspection programs. Establish programs for inspecting and certifying the performance of septic tank/leach field systems.
4. Establish performance standards for alternative individual waste disposal systems. - Establish performance standards for individual waste disposal systems other than septic tanks e.g. composting toilets, vaults, etc.
5. Construct facilities for handling septic tank pumpings at municipal treatment plants.

F Dredging Operations

1. Restrict dredging operations temporally - Prohibit dredging operations in certain areas during periods of fish migration and spawning.
2. Designate dredge spoil disposal sites - Designate dredge spoil disposal sites in bay and ocean suitable for disposal of different types of dredged material.
3. Monitor dredge spoil quality. - Monitor dredge spoil quality and assign to appropriate disposal sites.

G Vessel Wastes

1. Construct waste handling facilities at docks. - Construct sewer hook-ups or waste holding tanks at docks.
2. Construct waste handling facilities at houseboat berths. - Construct systems for handling wastes from semi-permanently moored vessels.

3. Require segregation of vessel wastes - Restrict the type of wastes that may enter vessel sanitary systems to those compatible with the municipal wastewater treatment facilities which they will ultimately enter.
4. Prohibit the discharge of waste in certain areas. - Prohibit the discharge of waste in certain areas either comprehensively (i.e., within the 3-mile limit) or within specific areas (i.e., the vicinity of bathing beaches or shellfish beds).

H. Aerial Fallout

This diffuse source of pollutants will be addressed in the Air Quality Maintenance Plan.

I. Solid Waste and Wastewater Treatment Residuals Disposal Activities

Control measures for these sources of pollutants will be developed in the Solid Waste Management Plan and San Francisco Bay Region Municipal Wastewater Solids Study.

WATER CONSERVATION, REUSE AND SUPPLY CONTROL MEASURES

Control measures for this plan element are divided into two groups; water conservation and supply; and reuse.

A Water Conservation and Supply

1. Restrict development of new supply sources. - Prohibit development of new supply sources unless the developer has an effective water conservation program.
2. Modify water supply rate structures. - Modify rate structures to encourage water conservation.
3. Install low water-use fittings in new homes. - Install low water-use shower heads and toilets and faucet aerators in all new homes.
4. Detect and repair leaks. - Detect and repair leaks in distribution system and provide assistance to consumers in detecting and repairing in-house leaks.
5. Install low water use fittings in existing homes. - Install retrofit water saving devices in existing homes.

6. Adopt low-water consuming landscaping practices. - Require low-water consuming landscaping at all new commercial or governmental buildings. Encourage residential adoption of low-water consuming landscaping.
7. Conduct public information program. - Conduct programs to increase public awareness of water use and conservation.
8. Adopt water conserving irrigation practices. - Adopt irrigation practices (spray or drip) that minimize irrigating losses and allow applications to be closely matched with crop needs.
9. Adopt water-saving industrial processes and practices. - Adopt industrial and commercial processes, in-plant reuse and good housekeeping practices that minimize water use.

B Water Reuse

1. Require the use of reclaimed water under certain circumstances. - Require the use of reclaimed water by industry or agriculture if reclaimed water adequately meets quality requirements for a particular use and if State Health Department regulations can be complied with.
2. Adopt measures to encourage wastewater reuse. - Adopt measures to encourage use of reclaimed water by industry and agriculture even when such use may involve some changes in agricultural or industrial practices.
3. Impose true cost of wastewater treatment on industrial and agricultural dischargers. - Impose true cost of wastewater treatment on dischargers to encourage in-plant and in-farm water reuse.
4. Adopt household water reuse practices. - Install household plumbing systems that allow reuse of lightly polluted household wastewaters as sources of landscape irrigation water.

DRAFT

6/15/76 Surface Runoff Control Measures 6/15/76

Attached is a preiliminary list of surface runoff control measures for discussion purposes. This list will be revised based on comments by the local agencies and will be finalized by August 31, 1976.* The local agencies will consider all the control measures on the final list in preparing the county surface runoff management plans.

This preliminary list is not meant to include measures for implementation such as taxing, city ordinances, general plan amendments, and state and federal regulations. It includes the following four groups:

- A. Measures to reduce accumulation of pollutants prior to runoff.
- B. Measures to control land use.
- C. Measures to reduce amount of pollutants and the peak flow or volume of runoff.
- D. Measures to treat and store runoff.

It should be noted that many of the listed control measures can be considered in combination. If you have any questions or comments regarding this preliminary list, please contact Peter Chiu or Don Hemovich at 415/841-9730.

* These candidate control measures were adopted for the purpose of preparing the county surface runoff control plans.

Surface Runoff Control Measures (Preliminary List)

Group A - Measures to reduce accumulation of pollutants prior to runoff.

These control measures are primarily designed for the reduction of pollutant accumulation in streets, storm drains, channels, etc. prior to the occurrence of storm.

1. Provide more frequent street cleaning

Increase in the frequency of street cleaning in densely populated or commercial areas.

2. Provide more efficient methods of street cleaning

Use of more efficient street cleaning devices or methods to reduce the amount of solid particles in the street.

3. Repair streets

Repair of streets in order to increase street cleaning efficiency and to reduce the accumulation of pollutants.

4. Control certain chemicals

Control use of certain chemicals which are known sources of pollutants. Such products include lawn fertilizers, pesticides, and other toxic chemicals used by householders.

5. Restrict auto parking

Restriction of auto parking in order to increase street sweeping effectiveness.

6. Control use of lots and streets

Reduction in the type of activities such as painting and car washing, auto repair and maintenance.

7. Control dumping

Control of dumping of residential, commercial, and industrial wastes on lots and streets.

8. Control littering and dog droppings

Control littering and dog droppings on streets and gutters.

9. Control automobile and other emissions

Control of emission from mobile and stationary air pollution sources, in order to lessen the amount of fallout which contribute to runoff pollutants. (This control measure will be considered by ABAG and not by the local agencies.)

10. Control direct discharge of pollutants

Control of direct discharge to storm water collection systems of pollutants such as paint, motor oil, pesticides, chemicals, and other hazardous liquid and solid wastes.

11. Clean storm water collection system

Periodic flushing and cleaning of storm drains and removal of debris from channels, pipes, inlets to prevent accumulation of solids in the collection system, perhaps keyed to prediction of rain.

12. Replace cross connections of sewerage systems

Separation of any cross connections between the storm sewer system and sanitary sewer system.

13. Insure proper operation of septic tanks and leach fields.

Proper construction and maintenance of septic tanks and leach fields to prevent surfacing septic tank effluents, which would increase the BOD and bacteria loading of surface runoff.

Group B - Measures to control land use

These control measures are primarily land use requirements which would modify the amount of pollutants and runoff generated from developed areas.

1. Develop slope density standards

Establishment of slope density standards which would limit the development of hillside areas thereby reducing the amount of sediments and runoff.

2. Maintain open space areas

Concentration of urban development to minimize the impervious land surface which will increase the quantity of runoff.

3. Control development patterns

Control of certain types of land use which are known to cause high amount of pollutants or runoff in environmentally sensitive areas. For example, restriction of development in flood plain or near stream channels and lakes in order to prevent large amount of pollutants from being transported directly into the waterway.

4. Develop buffer strip requirements

Development of buffer strip such as grass lands or undeveloped open space surrounding new developments in order to reduce the amount of runoff by infiltrating or retarding storm water.

Group C - Measures to reduce amount of pollutants and the peak flow or volume of runoff.

These control measures are primarily designed to reduce the total amount of pollutants and the peak flow or volume of runoff. It should be noted that modification of the peak flow alone may or may not reduce the amount of runoff or pollutants.

1. Control roof drains

Control of roof drains connected to storm sewers in order to reduce amount of runoff.

2. Construct rooftop detention and storage

Construction of rooftop detention and storage with appropriate outlet structures in order to delay the runoff thereby reducing the peak of the hydrograph.

3. Rechannel runoff to prevent flow over critical surfaces

Construction of channels, berms and other control structures to reroute flows around areas that have accumulated pollutants.

4. Redesign curb and gutter configurations

Redesign of curbs and gutters and streets to either delay or speed up the flow of urban runoff to provide for a more uniform flow in the collection system.

5. Remove debris in channels, pipes, and inlets, to improve flow.

Removal of large size debris such as construction and demolition debris in order to improve flow conditions in the collection system thereby reducing overflow; flooding and erosion.

6. Regrade disturbed areas

Regrading or terracing of areas that have been modified by construction related events or by natural erosion, in order to reduce the amount of sediment carried off by runoff.

7. Reseed or apply vegetative cover to bare slopes

Reseeding or applying vegetative cover to bare slopes to prevent loss of top soil thereby reducing the amount of sediments carried off by runoff.

8. Stabilize channels of rivers and streams

Stabilizing channels of rivers and streams to prevent soil loss in the storm channel through erosion and undercutting.

9. Control erosion at construction sites

Control of erosion at construction sites by checkdams, berms, straw bales, mulch and road maintenance in order to reduce or prevent runoff from reaching major drainage channels by entrapping sediment that has been carried off the construction site.

10. Regulate construction schedules to avoid concentration of activities in time or space.

Regulation of construction schedules to insure that runoff might be minimized either by staging or by scheduling projects with a consideration of runoff impacts.

11. Construct permanent berms for critical sources

Construction of permanent berms for critical sources such as gas stations, garages, and feedlots to prevent

runoff carrying critical constituents (metals, hydrocarbons, oil and greases) from reaching the stormwater collection system.

12. Use energy dissipators to reduce potential for erosion or transport of solids.

Construction of dissipators in stream channels to reduce sediment load and prevent channel erosion.

13. Increase perviousness of surfaces

Increase of pervious surfaces through construction of Dutch drains or porous asphalt paving in flat areas to allow water to infiltrate into the ground in order to reduce runoff.

14. Require minimum amount of pervious surfaces for new construction.

Requiring new construction projects to maintain a certain percent of the land to be pervious.

15. Use efficient tillage and plowing practices for agricultural areas.

Use of efficient tillage and plowing practices for agricultural areas to minimize areas disturbed thereby reducing runoff and soil erosion.

16. Modify drainage basin

Modification of land drainage to reduce the flow and to change the routing of runoff.

17. Modify weather

Modify the weather to limit the amount of precipitation falling on an area. (This control measure will be considered by ABAG and not by the local agencies.)

Group D - Measures to treat and store runoff

These measures are primarily designed to treat runoff directly or store flows for later treatment. They are mostly high capital intensive structural solutions.

It should be emphasized that these measures will only be considered at a reconnaissance level in preparing the county surface runoff management plan. Reconnaissance level means that the investigation would be limited to the following:

- A brief description of the control measure including the type of proposed facilities and treatment process and the capacity and method of operation of the facilities.
- A map of the county showing the location of major proposed facilities.
- An estimation of capital and operation and maintenance costs based on cost curves provided by ABAG.

1. Trap sediment and solids by use of catch basins

Construction of large catch basins to trap sediments carried by the storm water.

2. Impound runoff in upstream channels

Upstream impoundment of runoff to modify the peak flow.

3. Construct on-line or off-line storage

Construction of aboveground or underground storage facilities including ponds and tanks and oversized interceptors to which the storm water flow can be diverted and released after the peak storm flow.

4. Use existing capacity of storm sewers for storage of flows.

Use existing capacity of storm sewers for storage of flow. It may require use of remote sensing and computer-directed control systems that provide centralized control of regulator and pumping stations on trunk and interceptor sewers to optimize storage.

5. Construct treatment facilities

Construction of treatment unit processes such as screening, floatables removal, filtration disinfection, nutrient removal, swirl concentrators, biological systems, and physical-chemical systems depending on the type and amount of pollutants to be removed. Such unit processes can be added to the existing facilities or constructed as new facilities for storm water.

6. Use capacity at existing treatment plants

Use of available capacity at existing treatment plants to remove pollutants from storm water. Such a measure would require flow equalization and storage.

7. Prevent direct discharge of storm water into receiving waters.

Prevention of direct discharge of storm water into receiving waters by routing of treated or untreated storm waters to artificial lakes, or irrigation ponds.

9/21/76

DRAFT

Solid Waste Control Measures

1. Assure adoption of performance standards and other requirements for proper operation of landfill sites. Requirements may include:

- o measurement of waste quantities provided
- o daily cover for waste applied
- o open burning prohibited
- o fire protection provided
- o dust and noise control provided
- o drainage and grading provided
- o monitoring program provided

2. Assure proper design of landfill sites to avoid direct hydraulic continuity with surface and ground waters.

- o Assurance of proper design features such as impermeable liners, collection systems for leachate and hazardous gases, and monitoring wells where appropriate.
- o Assurance of adequate review of proposed design for new landfill sites.

3. Assure availability of class I sites for disposal of hazardous wastes.

- o Selection of potential site areas based on the environmental, social and economic criteria and on the type of hazardous wastes to be handled.
- o Investigation of joint purchase of suitable site areas and buffer areas to preserve sites from encroaching development.

4. Enact and enforce regulations and ordinances covering storage, collection, transportation and disposal of residential, industrial, agricultural and other special wastes such as hazardous wastes and wastewater solids. Examples of the regulations and ordinances are:

- o Ordinances for litter control.
- o Ordinances for control of illegal dumping to sewers.
- o Regulations for the transportation of hazardous wastes.

5. Enact programs for reduction of the quantities of wastes disposed of in landfills or dumped on land. Such programs may include:

- o Home separation and separate collection of recyclable materials.
- o Public subsidy of recycling center operations for municipal wastes and certain hazardous wastes, such as crankcase oil, pesticide containers, etc, as appropriate.
- o Capital expenditures for mechanical separation facilities.
- o Public education toward changing household consumption and waste handling patterns.
- o Placement and maintenance of litter receptacles and drop boxes in urban, recreational and rural areas.
- o Paper recycling in public offices.
- o Requiring the use of returnable beverage containers on a regionwide basis.

6. Advocate adoption of Federal and State policies to promote source reduction, recycling, and resource recovery. Policy areas may include:

- o Use of returnable containers
- o Reduced packaging
- o Equalization of freight rates between virgin and secondary materials.
- o Research into processes for recycling, conversion, recovery of resources from solid wastes.
- o Authority and funding for solid waste management and resource recovery planning at the regional level.

PRELIMINARY AIR QUALITY MAINTENANCE
CANDIDATE CONTROL MEASURES

DRAFT

Air quality maintenance planning requires a comprehensive control strategy approach for the air pollution problems of the region. It is anticipated that an air pollution control program aimed at long term solutions will include land use and transportation control measures, as well as the rigorous enforcement of maximum technological controls on stationary sources and automobiles.

The following list of control measures is a sample of the types of measures that have been suggested in other areas of the country and should serve as a starting point for discussing the most effective programs for the Bay Area. The listing is not exhaustive, but rather indicative of the selection of tactics which might be appropriate.

Of primary importance in the review of control measures for air quality maintenance are the issues of implementation and enforcement. The authority to implement and enforce various air pollution controls resides in a number of governmental agencies from the federal level through local planning commissions and special districts. Evaluation of the control measures for their feasibility of implementation will be considered at the same time that their technical effectiveness is being evaluated.

I. STATIONARY SOURCE EMISSION CONTROLS

The Bay Area Air Pollution Control District (BAAPCD) has currently in effect permit requirements which include many of the stationary source control measures listed below. The District's permit authority, which had been limited to new and modified sources, was extended to include existing sources on January 1, 1976. Therefore, the air quality maintenance planning process will consider recommendations to both increase the level of control under existing permits and require similar controls on sources which have not yet been brought into the permit system.

A. Stationary (or "Point") Sources

These control measures are designed to reduce pollution from fixed location sites such as power plants, refineries, and other industrial/commercial facilities.

1. Stack Controls

Combustion products and process losses which are normally vented to the atmosphere through stacks may be controlled directly by the installation of appropriate air pollution control equipment--e.g., baghouses (filters), scrubbers, and electrostatic precipitators.

2. Fugitive Emission Controls

Emissions from certain types of chemical, food, and other industrial processes may be controlled by wetting down or by containing the process in closed buildings or geodesic domes.

3. Process Controls

Emissions from combustion processes may be reduced by desulfurization of petroleum products, substitution of cleaner burning fuels (such as methanol), improving furnace design, and altering the fuel/air mixture ratio.

4. Indirect Controls

Reducing the level of operation of certain sources may be achieved by various indirect methods. For example, power plant emissions may be reduced by increasing the efficiency of home appliances such as refrigerators and air conditioners.

B. Diffuse (or "Area") Sources

These control measures are designed to reduce emissions from sources such as service stations and dry cleaners which are individually insignificant, but which become major contributors by virtue of their numbers.

1. Organic Solvents

Evaporation of photochemically reactive hydrocarbons from paints, dry cleaning operations, pesticides, etc., may be reduced by substituting less reactive organic solvents, and by increased use of other technologies.

At specific facilities (e.g., paint spray booths), emissions may be controlled by catalytic oxidation, direct flame incineration or activated carbon adsorption of organic vapors.

2. Gasoline Evaporation

Gasoline vapor loss may be reduced by using vapor recovery systems during transfer, reducing the volatility of gasoline as is done for aircraft fuels, modifying gas pump nozzle design to reduce spillage, and eliminating "topping off" gas tanks.

3. Particulate Emissions

Small scale filter and water wash units may be used to reduce emissions from sources such as paint spray booths; dust from construction and demolition sites may be controlled by wetting down. Additional reductions may be obtained by limiting access to unpaved roads and by limiting agricultural activities during dry periods. Emissions resulting from agricultural burning and forest/brush removal may be reduced by the use of portable controlled burning systems.

4. Small Engines and Appliances

Reduction of emissions from miscellaneous combustion sources (lawn mowers, furnaces, clothes dryers, etc.), may be achieved by improved design, installation of control devices, and increased use of electrical power.

II. MOBILE SOURCE EMISSION CONTROLS

A. Automobile Emission Control Measures

The control options for automobiles may be broken down into three major classifications: technological controls, improvements in traffic operations, and reducing automobile use.

1. More Stringent Emission Standards for New Cars

Control of automobile emissions is the responsibility of the State and Federal governments. California has the option of accepting the federal emission standards or adopting more stringent ones for automobiles sold

in California. It is the current policy of the Air Resources Board to require new automobiles to meet the most stringent standards technically feasible and economically possible.

2. Controls for Existing Automobiles (Retrofit Devices)

The addition of a new item, or the modification or removal of an existing item of equipment on an automobile after its initial manufacture.

3. Periodic Inspection and Mandatory Maintenance (I/M)

Reducing emissions through a system of periodic inspection and mandatory maintenance of air pollution control devices, or other engine components directly related to auto emissions.

4. Cleaner Burning Fuels or Engines

Develop non-polluting vehicles powered by alternative fuels or modified engines.

5. Improved Traffic Flow

Fewer stops and starts result in lower vehicle emissions. Careful planning, design and construction of street and intersections, computer-controlled signalization systems and better traffic signing are a few ways to help smooth the flow of traffic on city streets. Freeway and major arterial traffic flow may be improved by use of: ramp meters, traffic signals or special meters which control access to freeways; variable route signs, electronic signs which can direct traffic in different directions or along different routes to avoid further congestion; adjusting speed limits to provide for the most fuel-efficient vehicle operation; staggering work hours to extend and flatten the peak loads of trips to and from major employment areas.

6. Restrict Automobile Ownership

These control measures are designed to reduce the total automobile population and/or reduce the number of the older, more polluting, automobiles. Such measures might include economic incentives or limited registration by vehicle weight, age or pollution potential.

7. Restrict Automobile Use

Measures to restrict automobile use might include: auto-restricted/auto-free zones, parking management, limiting gas sales, increase/decrease driving age, toll roads, or fuel/mileage tax. Auto use could also be restricted throughout the region during pollution episodes.

8. Reduce the Need to Travel

Commute trips may be reduced by promoting a four-day work week throughout the region. Other trips may be eliminated by combining intraregional passenger and freight movement on the same vehicle, encouraging the use of communications systems in lieu of making a trip, coordination among stores and other services of goods deliveries to residential areas.

9. Encourage Alternative Means of Transportation

Increasing vehicle occupancy may be encouraged by promoting cost, convenience, or travel time-related measures to enhance the attractiveness of car pools, van pools, taxis, or jitney services. Measures might include subsidies, preferential parking, and preferential traffic control treatment.

Increasing mass transit patronage may be accomplished by transit service improvements, fare reductions, traffic-related incentives, park/bike-and ride facilities, demand-response systems, subscription transit, employee transit incentives, and gas rationing.

Non-polluting forms of transportation may be encouraged by improvement of bicycle and pedestrian facilities throughout the region.

B. Truck, Bus, and Other Heavy Duty Vehicle Emission Control Measures

Many control options for these vehicles are similar to those for automobiles. To avoid repetition, the explanation of control measures repeated in this section will contain only information which may differ from that given for automobiles.

1. More Stringent Emission Standards for New Vehicles

There is significant debate concerning the appropriateness of current standards and the possibility exists for establishing stricter controls. Currently these vehicles are relatively uncontrolled.

2. Controls For Existing Vehicles (Retrofit Devices)

This control measure may be important for trucks, buses and other heavy duty vehicles which remain in circulation much longer than automobiles.

3. Periodic Inspection and Mandatory Maintenance (I/M)

A system for heavy duty vehicles comparable to that proposed for autos.

4. Cleaner Burning Fuels or Engines

Development of new technologies in fuels and/or engines for heavy duty vehicles.

5. Improved Traffic Flow

Limiting the time and place of service and goods deliveries to off-peak hours and side streets reduces traffic congestion. Provision of contra-flow or off-road bus lanes can also improve traffic flow.

6. Reduce Heavy Duty Vehicle Use

Provision of "truck free" zones, optimization of routes and schedules and strategic location of storage and transfer terminals for consolidation of movement of goods are other methods to reduce use.

C. Other Mobile Sources

These control measures are designed to reduce emissions from aircraft, motorcycles, ships, railroad-locomotives, and off-road vehicles.

1. Aircraft

Ground level emissions from commercial jets may be reduced by towing them to the runway for takeoff, or by using fewer engines at higher (hence more efficient) power settings for taxiing. Installation of evaporative

controls, and a new method for clearing fuel lines would reduce emissions from general aviation piston aircraft. EPA regulations (1973) required smoke emission controls on all existing turbine engines, and set standards for new aircraft engines which became effective in 1979 and 1981. Other jet engine modifications may be made which will reduce pollutant emissions.

2. Ship and Rail

Reduction in emissions may be achieved for ships by the use of clean fuels within designated boundaries. Diesel locomotive emissions may be reduced by increased use of electric locomotives.

3. Off-Road Vehicles

New vehicle emission standards for off-road vehicles (effective 1990) will reduce the contribution of this source. Additional control measures could include restricting the time of day and/or seasons during which off-road recreational vehicles could be operated, and restricting use of off-road vehicles to certain areas. Various other measures similar to those for light duty vehicles may be used, including inspection/maintenance programs, and conversion to cleaner fuels.

III. LAND USE/LAND DEVELOPMENT CONTROLS

A. New Source Review

Control of the number and size of new stationary sources based on their emission potential. The BAAPCD has existing new source review rules. This control measure might require more stringent new source review criteria and procedures than currently exist.

B. Indirect Source Review

A review procedure for those facilities that by themselves are not a significant source of emissions but which attract considerable auto related activity (e.g., shopping center). Specific actions can be taken to help reduce air pollution emissions from indirect sources. For example, on-site circulation systems can be designed to coordinate with off-site systems, thus reducing congestion points.

C. Emission Allocation

Emission allocation requires emissions be limited to prescribed levels within an air basin by placing emission quotas on each area of the basin. The allocation is based on the established relationship between the assimilative capacity of the ambient air in the basin and the amount of emissions within the basin that would not violate air quality standards.

D. Development Timing Controls

This measure attempts to curb the rate of development by prescribing an annual quota or permit system for new development. New development proposals are evaluated with respect to conformance with such determinants as capacity of public facilities (e.g., schools, wastewater treatment capacity) to service them.

E. Modifying Local Comprehensive Planning Policy

This measure involves the inclusion of air pollution control as one of the policies to be used in developing comprehensive plans. Appropriate objectives for the comprehensive plan may include promotion of in-fill development as opposed to development on the urban fringe, and the design of an urban form which is conducive to providing efficient transit service.

F. Modifying Local Comprehensive Planning Practice

This is a strategy appropriately used by local governments to ensure optimal location of land use types and densities and to promote better relationships among land uses (from an air quality standpoint). Encouraging a mix of land uses within the municipality can help satisfy people's needs for housing, work, play, shopping, etc., without traveling long distances. For example, a park can serve the recreation needs of many, reducing the need to go elsewhere if no park were provided. Encouraging certain land uses to locate adjacent to others can encourage pedestrian and bicycle connections. For example, office parks can be mixed with or be adjacent to residential areas.

Final Candidate Control Measures for Air Quality

1. Require the use of high solid coatings where practical.
2. Require the use of water based coatings where practical.
3. Adopt the CARB standards for organic liquid storage.
4. Adopt closed system organic liquid storage with vapor recovery.
5. Require vapor recovery on small solvent users.
6. Adopt organic solvent regulation developed by the CARB Organic Solids Committee.
7. Enact a new maximum SO₂ emission limit of 300 ppm.
8. Require reduced sulfur content in fuels to .025%.
9. Adopt NO_x controls for non-highway and construction equipment.
10. Adopt NO_x limits for all new boilers.
11. Adopt lower particulate loading requirement - 0.05 to 0.1 grains/SCFM.
12. Adopt lower process weight allowable scale.
13. Adopt lower process weight maximum allowable scale.
14. Adopt best available control technology (BACT) regulation for existing sources with a time scale for compliance.
15. Adopt BACT regulation for all sources in lieu of emission concentration limits.
16. Adopt BACT regulation for all sources in addition to emission concentration limits.
17. Adopt a modern process technology rule aimed at promoting modernization of the areawide plant. This might, for instance, suspend a BACT rule for an agreement to modernize a plant with BACT included in modernized version. The intent of such a regulation would be to encourage modernization of old plants with new plants having improved pollution control technology.
18. Extend current BAAQMD requirements to smaller operations, i.e., fewer exemptions.
19. New Source Review (NSR) - continue present rule.
20. New Source Review - Adopt 100% off-set policy.
21. New Source Review - Adopt 110% off-set policy.
22. New Source Review - Adopt a sliding scale for emission off-set.
23. NSR Options 20, 21 or 22 with a limited area for emission off-set.
24. NSR Options 20, 21 or 22 with inter-pollutant emission off-set.
25. NSR Options 20, 21 or 22 with no inter-pollutant off-set or inter-pollutant off-set governed by location, etc.
26. NSR Options 20-25 qualified so that no credit is allowed for emissions that are in excess of other limitations.
27. NSR Options 20-25 with arrangement for off-set banking, allowing a prospective new source credit for emission reduction off-set achieved beyond that required by existing regulations.
28. Adopt regulations to promote industrial energy conservation.
29. Plant operation scheduling:
 - a) Seasonal scheduling to reduce polluting operations during critical weeks or months as determined by meteorology.
 - b) Scheduling maintenance down time and vacations, possibly short downs, to reduce pollutant load at critical times.
 - c) Interruptable operation dependent upon air quality conditions.
30. An air monitoring and meteorological analysis to identify and recommend mitigation measures, for certain localized problems.
31. Adopt particulate regulation based on particle size.
32. Replace throw-away container with re-usable containers.
33. Burn solid waste near point of generation, to reduce long hauls.
34. Apply 1309 with modified trade-off of 1311 and 1311-2 clearly described as an option.
35. Requiring some sort of retrofitting on older plants. Apply BACT to newer plants through permit system.
36. Penalty charge or tax based on amount of emission to encourage reduction.
37. Lowering the Reid vapor pressure of gasoline to reduce hydrocarbon emissions from storage, handling and use of motor vehicle grade gasoline.

II. Mobile Sources

1. Implement an evaporative emissions retrofit program for all vehicles.
2. Implement a catalytic retrofit program for past-71' vehicles able to operate on unleaded gasoline.
3. Adopt more stringent application of compliance procedures.
4. Adopt more comprehensive new and used motor vehicle surveillance program.
5. Adopt a mandatory vehicle inspection and maintenance program for light and heavy duty vehicles.
6. Adopt more stringent evaporative emission standards.
7. Implement a heavy duty gasoline exhaust emission retrofit program.
8. Adopt more stringent exhaust emission standards for new light and heavy duty vehicles.
9. Promote the use of new or modified fuels.
10. Promote the use of alternative power sources.
11. Establish emission standards for other mobile sources such as construction equipment, locomotives, ships, or recreational vehicles.

III. Transportation Controls

1. Measures to Improve Traffic Operations

A. Improve Traffic Flow

- 1) Computerized traffic control
- 2) Ramp Metering
- 3) Traffic engineering improvements
- 4) Off-street freight loading

B. Reduce peak-period traffic volumes

- 1) Staggered work hours
- 2) Four day work week
- 3) Off-peak freight delivery

2. Measures to Reduce Vehicle Use

A. Restrict Vehicle Ownership

- 1) Additional license fee
- 2) Registration limits

B. Management of Auto Access

- 1) Better enforcement of parking regulations
- 2) Limit on number of parking spaces
- 3) On-street parking prohibited during peak hours
- 4) Area license
- 5) Auto-free zones
- 6) Gas rationing

C. Increase Cost of Auto Use

- 1) Road pricing
- 2) Increased parking costs
- 3) Parking fee for shopper parking
- 4) Eliminate free employee parking
- 5) Increased gas tax
- 6) Increased tolls
- 7) "Smog charges"

D. Reduce the Need to Travel

- 1) Communications substitutes
- 2) Goods movement consolidation

3. Measures to Encourage Alternative Model of Travel

A. Increase Transit Ridership

- 1) Additional transit service
- 2) Fare reductions
- 3) Improved comfort
- 4) Bus and carpool lanes

B. Encourage Pedestrian Mode

C. Encourage Bicycle Mode

D. Encourage Ride Sharing

- 1) Toll reduction for carpools
- 2) Preferential parking and carpools
- 3) Carpool matching information
- 4) Assist vanpool formation

E. Promote Para-Transit Alternatives

IV. Land Use Management/Development Controls

More effective management of all five major aspects of land development through coordinated action by cities, counties, special districts, or regional and State agencies to reduce the magnitude and frequency of auto travel:

1. Timing - expand the presently very limited application of timing controls such as growth sequence zoning, building permit quotas, staging of sewer and water infrastructure and plant capabilities, etc.

2. Quantity - expand the presently scattered application of quantitative controls on development such as performance standard zoning and limited sewer and water infrastructure and plant capacities.

3. Location - Improve the presently inconsistent application of controls on the location of development such as coordinated management of infrastructure location, annexations, public land acquisition, agricultural preserves, hillside and soil conservation, and development moratoria.

4. Density - Encourage transit usage and other non-auto modes with coordinated density policies among local jurisdictions through the application of innovative density zoning mechanisms (slope density, building height regulations, etc.) fully coordinated with service capacities and commitments.

5. Type - Reduce home-to-work & home-to-non-work travel by encouraging more land use mix, especially in terms of housing/jobs balance.

APPENDIX B
ASSESSMENT CHECKLIST FOR THE
ENVIRONMENTAL MANAGEMENT PLAN

ASSESSMENT/EVALUATION PROGRAM

ASSESSMENT CHECKLIST

TECHNICAL MEMORANDUM NO. 1

November 1976

Background:

Assessment/Evaluation is a process conducted as the environmental management plans are developed. Assessment concentrates on the development of information about the potential impacts of alternative plans. Evaluation involves the use of the impact information by decision-makers in selecting the preferred alternative plans.

The goal of the assessment process is to compile information on a full range of effects that might be associated with control measures and alternative plans. The Assessment Checklist is the first step in realizing that goal. The Checklist, developed with the aid of public input, represents factors considered to be important in assessment/evaluation of pollution control measures. The second step in the assessment process involves identifying potential impacts of particular control measures using the Checklist factors in a matrix analysis. The third step involves developing a procedure to predict the nature and extent of the impact. The impact information is then displayed in summary form (with full back-up documentation) for evaluation by decision-makers.

Assessment Checklist Clarification

Assessment factors are organized into four broad categories -- Environmental, Institutional and Financial, Economic and Social. There is no implied weighting of importance in the organization nor are the categories mutually exclusive. The overlaps and interrelationships across categories cannot be reflected in a list merely displaying the types of potential impacts that could be studied. The assessment procedures will identify such interrelationships.

The Assessment Checklist also serves as one part of a screening mechanism. The major categories and subcategories of the Checklist can be related to the candidate control measures in a matrix analysis. The matrix analysis shows cause-effect relationships, screens out the number of criteria affected by a control measure, and directs the assessment of alternative plans.

When viewing the Assessment Checklist, these points should be kept in mind:

- 1) Not every factor will be used to assess every control measure or alternative plan.
- 2) Assessment procedures will incorporate both qualitative and quantitative impact methods and data.
- 3) The impact information will include a discussion of the reliability of the data and all assumptions used in the assessment procedures.

ASSESSMENT CHECKLIST

I. ENVIRONMENTAL CRITERIA

A. Air Quality

1. Federal standards for air quality

- Total suspended particulates
- Carbon monoxide
- Photochemical oxidants
- Hydrocarbons
- Sulfur dioxide
- Nitrogen dioxide

2. State standards for air quality

- Lead
- Sulfate
- Hydrogen sulfide
- Ethylene
- Visibility reducing particulates

3. Other air quality considerations

- Ozone depletion
- Odor

B. Surface and Ground Water Quality and Quantity

1. Effect on beneficial uses

- Municipal and domestic supply
- Agricultural supply
- Industrial process supply
- Industrial service supply
- Groundwater recharge

- Freshwater replenishment
- Navigation
- Hydropower generation
- Water contact recreation
- Non-contact water recreation
- Ocean commercial and sport fishing
- Warm freshwater habitat
- Cold freshwater habitat
- Preservation of areas of special biological significance
- Saline water habitat
- Wildlife habitat
- Preservation of rare and endangered species
- Marine habitat
- Fish migration
- Fish spawning
- Shellfish harvesting

2. Water quality objectives have been set forth in the Basin Plan (Water Quality Control Plan, San Francisco Bay Basin) to protect the beneficial uses of surface and ground waters. These objectives have been accepted by State and Federal agencies. The assessment process will involve the estimation of the effects of alternative environmental management strategies with respect to these water quality objectives and other policies.

3. The assessment process will also involve the estimation of mass emission rates of pollutants. These emissions will include:

- Organic material
- Nutrients
- Sediments and other suspended solids
- Disease causing organisms

- Floating material
- Heat
- Radioactivity
- Heavy metals and other toxicants
- Chemical constituents

4. Effect on surface and ground water quantity

- Impact on surface water supplies and requirements for water importation
- Impact on groundwater table
 - Changes in safe yield
 - Subsidence

C. Physical Resources

1. Effect on flora and fauna
 - Impacts on desirable, unusual, rare, or endangered species
 - Impact on plant species which provide cover and food for important wildlife species
 - Effects upon noxious species of plants or animals
2. Effect on the supply of critical land-related resources
 - Impact on prime or unique agricultural lands
 - Impact on other agricultural lands
 - Impact on mines, quarries, and mineral-bearing lands.
 - Impact on timber-producing and other forested lands
 - Impact on salt ponds
 - Impact on geothermal sites
 - Impact on wet lands, marshes, coastal zones, and estuaries
 - Impact on wildlife habitat
 - Impact on hilly land, fragile land, or land subject to erosion

3. Effect on land sites with special development characteristics

- Effects upon lands uniquely suited for seaport, airport, marina, or energy site development

4. Effect on recreation use or potential

- Impact on actual or potential recreation sites (e.g., parks, beaches, stadia, etc.)
- Impact on recreation use

5. Effect on solid waste

- Impact on solid waste volume
- Impact on resource recovery
- Impact on hazardous materials

D. Energy

1. Effect on energy consumption/demand

- Impact on natural gas consumption
- Impact on electricity consumption
- Impact on petroleum consumption
- Impact on coal or other non-renewable energy resource consumption

2. Effect on energy conservation/supply

- Impact on efficiency in the use of energy
- Impact on energy use
 - Peak energy use
 - Off-peak energy use
- Impact on resource recovery and recycling
- Impact on energy production as a by-product of residuals management
- Impact on solar energy production

E. Amenities

1. Effect on visual amenities

- Preservation of scenic areas, the natural state of the environment, and open space.
- Height and bulk of structures required for or affected by the plan
- Visibility impact of clean air
- Appearance of urban landscape

2. Effect on historic and cultural resources

- Impact on historic landmarks, monuments, districts, archaeological sites, and other areas of historic or cultural significance
- Impact on sites with special water-related historical significance

3. Effect on noise

- Impact and location of transportation noise
- Impact and location of construction noise
- Special noise problems due to pollution reduction activity (e.g., trash collection, street sweeping)

4. Effect on odor

- Impact on type, strength, location and duration of odors

II. INSTITUTIONAL AND FINANCIAL CRITERIA

A. Financial

1. Direct costs of implementation

- Capital and replacement costs
- Operating/maintenance costs
- Administrative costs
- Costs of regulation, inspection, and enforcement

2. Fiscal effects on local government (assuming constant levels of State or Federal assistance)
 - Impact on general obligations, revenue or special assessment bonds and bonding capacity
 - Impact on property tax base
 - Impact on property tax rate
 - Impact on sales and other taxes
 - Impact on fees, licenses, and other user charges
 - Impact on connection and stand-by charges
 - Impact on Federal and State grant subvention funding dependence and eligibility
 - Impact on interest earnings and cash revenues

B. Institutional

1. Impact on the provision of public services
 - Type, level, and displacement of public service (e.g., police, fire, sewerage, etc.)
2. Effect on public agencies
 - Impact on intergovernmental responsibility and coordination
3. Implementability
 - Public acceptability
 - Organizational and political feasibility
 - Legal capability
 - Impact on existing plans, regulations, and policies
 - Complexity or simplicity of control measures and their implementation
4. Flexibility
 - Reversability of decision

III. ECONOMIC CRITERIA

A. Production of goods and services

1. Effect on industrial, commercial, agricultural, and service activity by categories (e.g., manufacturing, construction, transportation, etc.)
2. Effect on employment, unemployment, and underemployment
 - Impact on job creation and elimination by categories (e.g., professional, technical, crafts, etc.)

B. Income and investment

1. Effect on wages and salaries
2. Effect on rents
3. Effect on capital investment for new and replacement facilities or equipment
4. Effect on profits

C. Consumer expenditures

1. Effect on the prices of goods and services
2. Effect on consumption of goods and services

IV. SOCIAL CRITERIA

A. Housing Supply

1. Effect on existing housing stock
 - Impact on the removal of housing by demolition or conversion
 - Impact on housing quality
 - Impact on the cost of housing and rent
 - Impact on the cost of housing rehabilitation & maintenance

2. Effect on new housing stock
 - Impact on the cost of new housing
 - Cost of land
 - Cost of site preparation
 - Cost of construction
 - Impact on supply of new housing
 - Quantity of new units produced
 - Proximity to employment opportunities

B. Physical Mobility

1. Impact on public transportation

- Cost
- Time
- Convenience
- Purpose of trip

2. Impact on private transportation

- Cost
- Time
- Convenience
- Purpose of trip

C. Health and Safety

1. Effect on site hazards

- Impact on seismic safety and risk
- Impact on flood plain safety and flood risk

2. Effect on transportation conflicts

3. Effect on public health

D. Sense of Community

1. Effect on community character
2. Effect on community stability

E. Equity

1. Impact on individual opportunity and lifestyle
2. Impact on special population groups
 - Aged
 - Youth
 - Ethnic Minorities
 - Women
 - Low-income
 - Handicapped people
 - Individuals with special employment problems

F. Urban Patterns

1. Location of development
2. Density of development
3. Type of development
4. Timing of development

APPENDIX C
BIBLIOGRAPHY OF TECHNICAL MATERIALS

WATER QUALITY TECHNICAL MATERIALS

Special Studies Reports

1. San Francisco Bay Shellfish: An Assessment of the Potential for Commercial and Recreational Harvesting, Jones and Stokes Associates, Inc., July 1977.
2. Environmental Effects of Dredging and Disposal in the San Francisco Bay Estuarine System, Louis H. DiSalvo, Ph.D., July 1977.
3. Effects of Delta Outflow on the San Francisco Bay System, J.B. Gilbert and Associates, October 1977.
4. Fish Kills in the San Francisco Bay Region: A Review, Robert Wong, August 1977.
5. Toxicants in San Francisco Bay and Estuary, The Bodega Bay Institute of Pollution Ecology, August 1977.
6. A Survey of Prevention Measures and Contingency Planning for Oil and Hazardous Material Spills in the San Francisco Bay Area, Gina Artus, July 1977.
7. An Assessment of Eutrophication in San Francisco Bay, A. J. Horne and S. McCormick, July 1977.
8. The Effect of Delta Outflow on the Density Stratification in San Francisco Bay, Hugo B. Fischer, Inc. and Waterfront Design Associates, June 1977.

Technical Memoranda, Issue Papers and Progress Reports

1. Water Quality Technical Memorandum 1, Preliminary Candidate Control Measures for Municipal and Industrial Discharges, Non-Point Sources Other than Urban Runoff and Water Conservation, Reuse and Supply, September 1976.
2. Water Quality Technical Memorandum 2, Review of Existing Laws, Policies and Requirements for the Pretreatment or Treatment of Industrial Wastes, October 1976.
3. Water Quality Technical Memorandum 3, Significant Discrete Industrial Dischargers, January 1977.
4. Water Quality Technical Memorandum 4, Septic Tank Systems - The Problem and Possible Solutions, February 1977, revised May 1977.

5. Water Quality Technical Memorandum 5, Existing and Planned Wastewater Management Facilities in the San Francisco Bay Region, January 1977.
6. Water Quality Technical Memorandum 6, Vessel Wastes - The Problem and Possible Solutions, May 1977.
7. Water Quality Technical Memorandum 7, Equivalent Heavy Metals Loading Rates in the Bay Region 208 Planning Area, February 1977.
8. Water Quality Technical Memorandum 8, Existing Municipal Wastewater Management Agencies in the San Francisco Bay Region, February 1977.
9. Water Quality Technical Memorandum 9, Financing Municipal Wastewater Facilities, February 1977.
10. Water Quality Technical Memorandum 10, Public Financing of Industrial Wastewater Abatement, February 1977.
11. Water Quality Technical Memorandum 11, Provisional Series 3 Projections Through 1990, by Sewerage Units, March 1977.
12. Water Quality Technical Memorandum 12, 1975 Point Source Discharge Data for Bay Region 208 Planning Area, March 1977.
13. Water Quality Technical Memorandum 13, Preliminary Reclaimed Wastewater Market Survey, April 1977.
14. Water Quality Technical Memorandum 14, Preliminary Water-Use Projections for Bay Area, April 1977
15. Water Quality Technical Memorandum 15, Estimated Municipal and Non-Discrete Industrial Wastewater Loads in the San Francisco Bay Region, April 1977.
16. Water Quality Technical Memorandum 16, Method for Estimating Future Discrete Industrial Waste Loads, April 1977.
17. Water Quality Technical Memorandum 17, Significance of Pollution Problems Resulting from the Extraction of Mineral Resources, May 1977.
18. Water Quality Technical Memorandum 18, Estimated Industrial Wastewater Loads in the San Francisco Bay Region, May 1977.
19. Water Quality Technical Memorandum 19, Preliminary San Francisco Bay Modeling Results, June 1977.
20. Water Quality Technical Memorandum 20, Salt Intrusion into Groundwaters, June 1977.
21. Water Quality Technical Memorandum 21, Further San Francisco Bay Modeling Results, July 1977.
22. Water Quality Technical Memorandum 22, Oil and Chemical Spills, July 1977.
23. Water Quality Technical Memorandum 23, Modeling Results - II, August 1977.

24. Water Quality Technical Memorandum 24, Dredging and Spoil Disposal, August 1977.
25. Water Quality Technical Memorandum 25, Proposed San Francisco Bay-Delta Research Program, September 1977.
26. Water Quality Technical Memorandum 26, Estimated Costs of Treating Industrial Discharges, October 1977.
27. Water Quality Technical Memorandum 27, Effects of Water Conservation Upon Wastewater Treatment, October 1977.
28. Water Quality Technical Memorandum 28, Recommendations on Maintenance of Outflow Rates from the Sacramento - San Joaquin Delta, November 1977.
29. Water Quality Issue Paper 1, Water Quality Analysis and Pollution Strategies, August 1976.
30. Water Quality Issue Paper 2, Pretreatment of Industrial Wastes Discharged to Municipal Sewer Systems, January 1977.
31. Surface Runoff Technical Memorandum 1, Preliminary Outline of Storm Water Sampling Program, July 1976.
32. Surface Runoff Technical Memorandum 2, Procedures for Review and Update of Base Maps, August 1976.
33. Surface Runoff Technical Memorandum 3, Demonstration Watersheds Description and Selection Criteria, August 1976.
34. Surface Runoff Technical Memorandum 4, County Water Quality Sampling Programs Modifications and Comments, January 1977.
35. Surface Runoff Technical Memorandum 5, Guidance for Identification of Surface Runoff Pollution Problems, February, 1977.
36. Surface Runoff Technical Memorandum 6, Rainwater Quality and Its Implications on Surface Runoff, February 1977.
37. Surface Runoff Technical Memorandum 7, Guidance for Identification and Ranking of Surface Runoff Pollution Problems, April 1977.
38. Surface Runoff Technical Memorandum 8, Guidance for Preparation of the Document Describing County Surface Runoff Plan, July 1977.
39. Surface Runoff Technical Memorandum 9, Water Quality Problems in Local Lakes and Reservoirs, August 1977.
40. Surface Runoff Issue Paper 1, Organizational Structure of the Surface Runoff Management Program, November 1976.
41. Surface Runoff Issue Paper 2, Visibility of Water Quality Problems, November 1977.

WATER SUPPLY TECHNICAL MATERIALS

1. Water Conservation, Reuse, and Supply Report for the Bay Region, J. B. Gilbert and Associates, November 1977.
2. Water Quality Technical Memorandum 13, Preliminary Reclaimed Wastewater Market Survey, April 1977.
3. Water Quality Technical Memorandum 14, Preliminary Water-Use Projections for Bay Area, April 1977.

SOLID WASTE TECHNICAL MATERIALS

1. Solid Waste Technical Memorandum 1, Status of Existing Landfill Sites in the San Francisco Bay Region, March 1977.
2. Solid Waste Technical Memorandum 2, Existing Authorities for Hazardous Waste Management, April 1977.
3. Solid Waste Technical Memorandum 3, Action Program to Reduce Waste Generation and to Promote Source Separation and Recycling in the Bay Area, April 1977.
4. Solid Waste Technical Memorandum 4, Issues in Current Permit Approval System for Solid Waste Management Facilities and Disposal Sites, April 1977.
5. Solid Waste Technical Memorandum 5, Existing Practices for Hazardous Waste Management in the San Francisco Bay Area, May 1977.
6. Solid Waste Technical Memorandum 6, Current and Projected Quantities of Hazardous Industrial Wastes Produced in the San Francisco Bay Area, June 1977.
7. Solid Waste Technical Memorandum 7, Identification of Possible Class I Site Areas, July 1977.
8. Solid Waste Technical Memorandum 8, Elements of a Coordinated Permit Approval Process for Solid Waste Management Sites and Facilities, July 1977.
9. Solid Waste Technical Memorandum 9, Issues for Federal and State Legislative and Administrative Action to Promote Source Reduction and Resource Recovery from Solid Waste, August 1977.

AIR QUALITY TECHNICAL MATERIALS

In the course of developing the Air Quality Maintenance Plan, numerous documents were written to describe the many issues and technical aspects of the plan. These have taken three forms:

- o historical/background information
- o technical memoranda
- o issue papers

Background reports describe the history air quality planning in the Bay Area and the role of the AQMP in this context. Technical Memoranda generally focus on a single topic and contain the assumptions and methodology for deriving quantitative information, e.g., emissions inventories, costs, control measure effectiveness. Issue Papers contain discussions of issues for which there are several plausible alternative options. Where appropriate, these papers describe the reasoning behind the final, selected course of action.

BACKGROUND

- o "Summary of the Air Quality Maintenance Plan Work Program for the Bay Area Joint Technical Staff," November 1976.
- o "History of Air Quality Planning in the Bay Area," February 1976.

AQMP/TECHNICAL MEMORANDA

- o AQMP/Tech Memo 1, "Base Year Selection and Technical Assumptions," September 1976.
- o AQMP/Tech Memo 2, - "Projections/Forecasting: System Description and Technical Assumptions," December 1976.
- o AQMP/Tech Memo 3, - "Air Quality Past and Present," March 1977.
- o AQMP/Tech Memo 4, - "Status of Existing Controls Related to Air Pollution," March 1977.
- o AQMP/Tech Memo 5, - "Candidate Control Measures," April 1977.
- o AQMP/Tech Memo 6, - "The AQMP: Legal Requirements," July 1977.
- o AQMP/Tech Memo 7, - "Development and Analysis of Alternative Air Quality Strategies," July 1977.
- o AQMP/Tech Memo 8, - "Summary of the Technology Forecast for Motor Vehicle Emission Control," July 1977.

- o AQMP/Tech Memo 9, - "Summary of Technology Forecast for Organic Solvents Emissions," July 1977.
- o AQMP/Tech Memo 10, - "Summary of Technology Forecast Questionnaire: Combustion Sources," August 1977.
- o AQMP/Tech Memo 11, - "Present and Projected Air Pollution Emissions in the San Francisco Bay Region," August 1977.
- o AQMP/Tech Memo 12 - "Baseline Motor Vehicle Emission Inventory: Methodology and Results," August 1977.
- o AQMP/Tech Memo 13, - "Benefits of Air Pollution Control," December 1977.
- o AQMP/Tech Memo 14, - "Effectiveness and Costs of Alternative Air Pollution Control Programs," August 1977.
- o AQMP/Tech Memo 15, - "Assessment of Alternative Air Pollution Control Programs," January 1978.
- o AQMP/Tech Memo 16, - "Institutional, Legal and Financial Requirements for Implementing Proposed Air Pollution Control Programs," August 1977.
- o AQMP/Tech Memo 17, - "Baseline LIRAQ Air Quality Projections," September 1977.
- o AQMP/Tech Memo 18, - "LIRAQ Emissions Sensitivity Analysis," September 1977.
- o AQMP/Tech Memo 19, - "Applicability of Selected Statistical/Empirical Techniques to Air Quality Analysis in the San Francisco Bay Region," September 1977.
- o AQMP/Tech Memo 20, - "Procedure for Interpretation of LIRAQ Air Quality Projections," September 1977.
- o AQMP/Tech Memo 21, - "Geographical Distribution of Emissions from Non-Major Point (Area) Sources," October 1977.
- o AQMP/Tech Memo 22, - "Regional Travel Projections for AQMP," November 1977.
- o AQMP/Tech Memo 23, - "Evaluation of Transportation Control Measures," November 1977.
- o AQMP/Tech Memo 24, - "Analysis of Suspended Particulate Matter in the San Francisco Bay Region," November 1977.

ISSUE PAPERS

- o AQMP/Issue Paper 1, - "Air Quality Modeling for the San Francisco Bay Region," September 1976.

- o AQMP/Issue Paper 2, - "The Air Quality Modeling Process: Accuracy and Related Issues," May 1977.
- o AQMP/Issue Paper 3, - "Regional/Local Issues in Land Use Controls for Improving Air Quality."

Additional Materials

Association of Bay Area Governments, Provisional Series 3 Projections: Population, Housing, Employment, and Land Uses in the San Francisco Bay Region, March 1977.

Association of Bay Area Governments, Revised Series 3 Projections: Working Paper, March 15, 1978.

Assessment Procedures Manual, Environmental Management Plan, Association of Bay Area Governments, 1976.

Assessment/Evaluation Program, Technical Memorandum No. 1, Assessment Checklist, November, 1976

Dickert and Domeny ed., Environmental Impact Assessment: Guidelines and Commentary, University Extension, University of California, Berkeley, 1974

Blisset, Environmental Impact Assessment, National Science Foundation, 1977.

APPENDIX D

COMMENTS FROM PUBLIC HEARINGS
ON THE DRAFT EMP AND DEIR
AND STAFF RESPONSES

Public Hearings on
Draft EMP and Draft EIR

February 1, 1978, San Jose

February 8, 1978, Berkeley

February 16, 1978, San Francisco

PUBLIC HEARING - 2/1/78
(San Jose)

Public Testimony on Draft EMP and Draft EIR

TESTIMONY

Bob Sturdivant, Santa Clara County Board of Supervisors.

Board of Supervisors (meeting of 1/30/78) supports the overall objectives of EMP as well as most policies and actions proposed. Most policies and some actions (particularly in AQMP) are now being implemented by County. Recognize need for regionwide efforts to solve most problems addressed, but local level needs to implement. Strongly support continued local land use control and land use decisions. To implement plan Federal and State funding should be sought. Suggested two-step implementation process--in developing work program identify actions which must be taken immediately and those which may be deferred to later date. Would provide various agencies with timetable to budget staff and financial resources necessary to carry out responsibilities. Continuing planning process should provide more time for local review and citizen participation (at least 3 months for local review).

On A.Q. - Board supports basic policies and principles, including those in development and land use management portion. We have reorganized policy statements to clarify them. Oppose parking tax proposal; it would put downtown San Jose at competitive disadvantage which directly counters policies aimed at revitalizing existing urban centers. Board supports increasing density for future developable areas but local governments should have primary responsibility.

On W.Q. - Board supports basic plan. South Santa Clara County should not be subject to control measures for San Francisco Bay because that area drains into Monterey Bay. Unless adequately justified it is more appropriate to assign responsibilities to existing agencies than to ABAG. Policy on encouraging consolidation of treatment facilities seems to support supersewer construction; should not be prejudged before study completed. Modify plan to specify each county's surface runoff management plan will primarily determine surface runoff control measures. Policy on extension of sewer lines may be inconsistent with urban service areas recommendations in air quality plan. Recommend contingency plans for water treatment plants in event of strikes or breakdowns.

On W.S. - Board supports basic plan. Clarify Policy 1 (drinking water quality, especially well water and water withdrawn from delta). Interties between various water agencies should not be presumed before determining necessity or cost effectiveness. More research needed on reclaimed water use.

On S.W. - Board supports most policies and actions. Counties should be primary implementing agencies. Question whether ABAG interjection in process (Policies 5, 6, and 7) will streamline process. Add section on bottle recycling program and stronger statement on transporting hazardous waste and location of hazardous waste sites closer to source.

ABAG, not EMTF, should be listed as final authority in plan update process. Further review time needed. Annual work program should indicate priorities and major tasks to be initiated, continued or completed during year.

STAFF RESPONSE

Staff notes all comments, which have been based on the views of the Santa Clara County Board of Supervisors. Most comments need no response. As for the parking tax, it is proposed to be in effect between 6 a.m. and 10 a.m. so that commuters that park in paid lots are affected; the specific effect in Santa Clara County would depend on the location of paid parking lots. Staff agrees that South Santa Clara County, which drains into Monterey Bay, should be the subject of policy recommendations for Monterey Bay water quality. The WQMP is not intended as a prejudgment of the County's "super sewer." Staff agrees with comment on role of county surface runoff plans. On the WSMP, most of the tasks suggested should be undertaken during the continuing planning process. On the SWMP, staff recognizes the primary role to be played by counties in implementing any solid waste management plan. Other comments noted. Where EMTF is listed as the final authority on the plan process, that is in reality ABAG. EMTF's work is always subject to direction by the ABAG Executive Board. This point will be clarified in the text.

TESTIMONY

Bill Williams, President of Southern Division of Associated Building Industry.

Even though this plan may have some good things to say, the timetable for action is entirely too short for such an important matter. Best to just scrap the whole thing, though most frightened by land use and transportation portion of plan. Recommend this portion be omitted from the plan in its entirety--because plan allows only 38,000 new units to be built each year; State Housing and Community Development Department figures would make this about 15,000 units short of what we need each year--this can only lead to a drastic inflation in cost of housing and a 25% loss of employment in an industry so important to economy to area. Allowable land for residential development from now until 1990 will be reduced from 84,000 acres to 16,000 acres--a reduction of 64,000 acres. Acreage set aside for industrial growth will be reduced from 3,900 acres to 2,900 acres in same period of time--all at a time when local governments are desperately trying to entice industry into area. We don't need any more restrictions on industry. Gravely concerned about information of another layer of government, at a time when Federal and State are struggling to put a lid on government spending. Our organization heartily endorses San Jose Councilman Pegram's recommendations.

Ron James and Jim Tucker, San Jose Chamber of Commerce

Stationary source controls in AQMP do not take into account economic and social factors--air quality alone is the determinant. Everyone will feel the impact. The 43,000 jobs "not created" because of application of N.S.R. is staggering, and probably just the tip of the iceberg. More complete analysis of job impact is needed and should be added to the EIR. Plan is regressive and has greatest economic effect on low income families. Have reservation about Bay Area's ability to fund cost of this program. Format of plan of great concern--all strategies appear to require adoption as soon as administratively possible.

Specific recommendations apply to AQMP: 1) on stationary source controls (action 3, page VI-134), we urge that term BACT be replaced with RACT, acceptable to EPA in the plan; 2) we support continued aggressive programs and policies aimed at cleaning up direct automobile emissions through technological modification of the engines, 3) on transportation controls many are supported by Chamber of Commerce--we urge deletion of parking tax on all vehicles in paid park facilities because it would have a significant negative impact on San Jose's efforts to rebuild a strong vital downtown area; Action 13: no specific position on S.F. auto-free zone but this is not a strategy we want to see applied on a regionwide basis at a future date; 4) development and land use management: (p. VI-140) all actions and policies Chamber has consistently opposed adoption of land

STAFF RESPONSE

PUBLIC HEARING
2/1/78--Page 2

General comments that the entire plan should be delayed or disapproved are difficult to respond to, but staff does note them. The plan does not call for a reduction in needed housing units, nor does it say that land available for residential development should be reduced from 84,000 acres to 16,000 acres. These figures are a serious misinterpretation of the effects of the air quality plan. Staff has prepared Air Quality Tech Memo 15, "Assessment of Air Pollution Control Programs," to address these issues. The number of housing units estimated in the plan is based on a lower population forecast. This may differ from other estimates, but it should be realized that the staff figure is an estimate and not a regulation. It does not have the effect of limiting development that would otherwise take place. As for land available for residential development, the total acreage under compact growth would be 13% less than under current programs, although the total prime developable land would increase by 10%. In fact, the number of housing sites available under compact growth assumptions would be about 21% more than the potential housing sites available under current programs.

New source review is presently being implemented by the Bay Area Air Pollution Control District. The figure on jobs "not created" assumes that new source review is not put into effect anywhere else in the country; if all non-attainment areas use a similar review, the Bay Area should not be affected any worse than any other region not currently in compliance with Federal air quality standards. A more complete analysis of the effects of the air quality plan is available in the memorandum "Assessment of Air Pollution Control Programs." Many strategies would be adopted soon under the draft plan, but their implementation is not necessarily so quick. For example, full implementation of the land use policies and actions is not assumed until 1985. Other comments noted.

Specific definitions of RACT and BACT have yet to be worked out; staff is considering various alternative definitions and their impacts on air quality and other factors. Staff notes the Chamber's position on a regional parking tax. There is no plan to expand the auto-control zone concept throughout the region. With respect to the land use policies and actions, AQMP Tech Memo 15 discusses in detail the effects of the program. Also local governments will continue to have the final say over land use decisions if the region makes a good faith effort to implement Federally

TESTIMONY

Ron James and Jim Tucker, San Jose Chamber of Commerce - Continued

use policies for single-purpose of air pollution control, especially when dubious air quality benefits are far outweighed by community, economic, and social needs--including land use strategies in EMP-- will result in Federal and State enforcement of these strategies. Local government responsive and accountable to the people, will have nothing to say. Urge complete deletion of this section. On WQMP, Policy 6, dealing with encouraging discharge into well-mixed receiving waters, issue is Chamber. Concur, with county staff position that you add something to policy like "where environmentally and economically feasible" statement, which will allow reconsideration of that. Chamber has aimed specific marketing programs at kinds of industries that would provide jobs for unemployed: manpower training, etc.

Councilwoman Auralee Street, City of Santa Clara.

(Have written letter to all city councilpeople in County)

City supports ideals and objectives of air and water quality, water supply and solid waste; many of these areas have been addressed and implemented on the local level. Council has two broad, very important concerns which should be resolved before final recommendations go to Governor. First deals with ultimate role of ABAG in E.M. process and resulting loss of control with respect to cities, counties and existing single-purpose agencies; second is concern over impact of plan on local land use determination. Our Council believes reviewing bodies must first resolve these issues and then consider more technical details. Section 208 of Clean Water Act and Resource Conservation and Recovery Act do not require the establishment of a new regional planning and implementation agency since such needs are already met by the State S.W.M.B., the S.W.R.C.B., and existing local agencies. Much of the vitality and strength and coordination which should be achieved in waste management throughout the region, is dissipated by and among the many conflicting and overlapping agencies which presently have statutory responsibility; intrusion of an additional planning, coordinating and implementing agency into this will create more confusion and delay, further heighten conflict and further erode local prerogatives. We advocate that Federal and State action in solid waste management be focused primarily upon the implementation of countywide plans in form of State and Federal grants, particularly in area of constructing resource recovery facilities which require extraordinary capital expenditures.

Regarding WSMP -- existing water supply arrangements have been successful and respective agencies responsible have planned projects to assure safe and dependable sources of water to the region. The WSMP in recommending a WMCC takes position that a regional system

STAFF RESPONSE

mandated air quality standards. Failure to do so can mean the loss of Federal highway, sewer and other funds, as well as other sanctions which would have dramatic effects on local land use actions. Staff notes the comment on discharge of effluent into well-mixed receiving waters; the draft plan's policy was not intended to single out any specific project.

ABAG is local government, i.e., cities and counties of the Bay Area. The purpose of including ABAG as the responsible agency for certain actions is often because local government has no other voice in influencing some decisions, and ABAG can act as the voice of local governments collectively throughout the Bay Area. It is not the intent of any part of the Environmental Management Plan to delay implementation of any other plan; for example, the first action recommended in the Solid Waste Management Plan is to carry out the county plans. About the Water Supply Management Plan, it was included because as water demands are increasing, people are becoming more reluctant "to accept the costs and environmental consequences of the large landscape-altering projects necessary to deliver it." (Volume I - page IV-1). The plan explores several alternatives for matching future demand with future supply. The water supply plan does not recommend that particular projects either be built or left unconstructed because the drought has left too much doubt in people's minds as to how much water can reasonably be delivered to the region. About the land use and development actions, the intent is not to usurp traditional roles played by local governments in land use decision making; ABAG does not have such authority and is not seeking it. All land use policies and actions are in effect somewhere in the Bay Area at present.

TESTIMONY

Councilwoman Auralee Street, City of Santa Clara - Continued

is better--we question that position since there is no sound argument for it. The plan oversimplifies the possibility of free exchange of water among agencies because legal and political constraints are not recognized. In general we have many questions on land use management section; controls proposed are marginally effective and economically and socially disruptive. Land use section does not allow for community determination of its own character and disregards freedom of choice regarding where a person wants to live and work.

U.E. Winthrow, Building Trades Council.

The plan will severely affect those least able to afford the costs, yet nowhere in the plan or EIS does plan detail the scope of these future personal crises. Especially disturbed by land use control elements. Including these controls could result as follows: plan calls for limitation in land available for development to about 59% of what we could currently use; this will drive up the cost of land and taxes. Fifteen thousand needed units each year will not be built--that translates into jobs and revenue for small businesses, a serious impact of the plan. Consumer price index will rise by 10% as a result of land use policies alone. Employers will be forced to pay workers more and prices will rise. Taxpayers will foot the bill. Asking for deletion of land use provisions--too many questions that must be answered.

Bob Weeks, 5196 Rafton Drive, San Jose, CA. Speaking as Individual.

ABAG should be commended for the very idea that we can work together to work out our future. Personal data and facts in Santa Clara show we do not need an expensive new water supply system--the cost of the water saved is a lot less than bringing water in. Same true of solid waste plan for recycling. We should look at what the future can be like (the carrot) rather than the stick of the Feds will cram it down our throat if we don't do anything. Plan should be supported.

STAFF RESPONSE

Staff finds it difficult to respond to general comments, except to note them. As for the specific comment that the land available for development is limited by the plan to 59% of what could be used, this is simply not true. Under compact growth assumptions, the total developable land would be 87% of what would be available under current programs, although for prime developable land, this would actually increase by 10% with compact growth. In addition, the total number of housing sites under compact growth would increase from about 825,600 to 999,300, or about 21% more than under current programs. Furthermore, the plan does not call for the removal of 15,000 housing units in the Bay Area that would otherwise be built. Further details on the effects anticipated as a result of the air quality plan are found in AQMP Tech Memo 15/ "Assessment/Evaluation Tech Memo 4, Assessment of Air Pollution Control Programs."

Staff notes comments. No response needed.

TESTIMONY

John A. Rebeiro, Carpenters of Northern California

Amongst 8,000 carpenters of S.C. County there are a lot of people concerned and worried about AQMP. The land use element of the plan threatens huge adverse social and economic costs to entire region--and as usual costs will fall squarely on backs of those least able to bear them. Difficult for him to believe that this body would so openly invite Federal intervention into our local planning procedures. Impacts of land use controls on jobs and business in area main concern of trade unionists--biggest problem is ABAG has failed to make any kind of a comprehensive analysis of impacts on working people in region. When we talk about density, we may be talking about instant slums, which has been our experience in San Jose (east side). Plan will call for a loss in 15,000 total housing units available which means losing 19,000 man years of labor in a given year and a \$1.3 billion loss in associated business revenues. Absent some incredible crisis which does not exist, it is inconceivable that we undertake massive social engineering program without far more study and understanding.

Werner Gutfeld, 135 Rivera Drive, Los Gatos. Speaking as Individual.

Spoke to plan's effect on senior citizens. Understands plan will cause a temporary rise in prices--what is meant by temporary, 10 or 15 years? How bad will rents go up? How can those on fixed income pay increased rents and other increases in general cost of living? These questions should be answered. What will cost be to consumers? How much will this plan cost business sector and individual cities in terms of lost income?

STAFF RESPONSE

The Memorandum on "Assessment of Air Pollution Control Programs" addresses all concerns raised, which center on the effects of the land use policies and actions. The plan does not call for a reduction in the number of housing units that would otherwise be built or available. EPA can perhaps review those local land use decisions affecting air quality, but without an approved plan major construction in the Bay Area will not be allowed after July 1, 1979.

AQMP Tech Memo 15 assesses the impacts of land use controls on housing costs and other factors. It was found that compact growth policies would influence the demand for certain parcels of land and therefore the cost of that land. However, the effect of such land value changes is more significant for those housing types which consume more land area. Land represents a higher proportion of the total cost of single family and townhouse units than for low rise and high rise apartments. In typical urban areas, implementation of compact growth might increase the market value of apartments by 1-3 percent. For townhouses, it might be a 4-6 percent increase, and for single family detached housing, 7-8 percent. These are the increases in the urban area; in suburban areas, the impact on the four housing types is less, and on the periphery where controls are much less in effect, it is much less. Many middle income families are already priced out of the market farther away from the consumer, although townhouses and apartments would be more feasible. As for commercial areas, compact growth would tend to bring development that might otherwise locate towards the periphery into the more urbanized areas. Employment patterns, on the other hand, probably would not shift. Further details can be found in Tech Memo 15.

TESTIMONY

Frank Biehl, Lung Association. (For six Bay Area Lung Associations.)

Human life is more important than economic or political considerations. Goal of AQMP is attainment and maintenance of State and Federal air quality standards as expeditiously as practicable. According to Clean Air Act, Federal primary standards must be attained not later than December 31, 1982, with exception of photochemical oxidant and CO which were extended to 1987 for which reasonable progress has been shown. People are affected adversely by four components of pollution: suspended particulate matter, CO, SO₂, and photochemical oxidant. Draft recommendations address only photochemical oxidant. We recommend: inclusion of control strategies for attainment of the CO standard, of standard for particulates, of control strategies for maintenance of SO₂ standard.

STAFF RESPONSE

Staff recognizes that the draft AQMP in its present form addresses only photochemical oxidant. Further work on other pollutants is underway, and all pollutants for which the Bay Area is a non-attainment area will be studied, and plans will be developed. As for sulfur dioxide, the Bay Area is not a non-attainment area, but that is now being examined and will continue to be part of the continuing planning process.

TESTIMONYRichard H. Thuillier, S.R.I. International.

SRI International evaluated AQMP under contract Bay Area Council. Final report last month; Progress report of 1977 material available as of December 12, 1977. Comments based Volume 1. Without doubt technical results highly professional state of art approach solution air quality problems. Commendable. Problem areas. Draft plan incomplete; recommendations only 1 of pollutants covered by ambient air quality standards; other pollutants scheduled continuing planning process. Short time frame public review; adoption final plan; concern adequacy technical treatment; public review other potential pollution problems. Section 10 of AQMP; potential importance CO; particulate problems may be underestimated. Inherent uncertainty certain projected analysis supporting plan. Issue uncertainty duly recognized within the plan; unavoidable uncertainties not approached fullest degree caution/flexibility consistent with seriousness plan impact. Comprehensive approach suitable maintenance standards long-term; certain measures (e.g. transportation controls; land use management) provide small direct air quality benefit; disproportionate substantial community impact. Benefits land use measures estimated long-term when uncertainty projection greatest. Favor greater degree contingency implementation planning/phasing. Concerns Volume 1, Chapter II; urges effort accommodate uncertainty; continuing planning process sensitive changes growth trends. Accomplished emphasizing measures maximize probability short-term success. Such success if carefully monitored/verified facilitate acceptance additional long-term measures at later date. Referred task force to final report (for Bay Area Council).

Janet Owens, Midpeninsula Citizens for Fair Housing.

This essential endeavor, not only because mandated State/Federal law; because importance lives; health; kind world pass on children. However, plan ignores important goals. Concern adequate, affordable housing for all. Air quality improving; Bay Area housing situation deteriorating land use decisions must primarily address critical problem housing supply; same time meet environmental concerns. Pure air clean water not impact hopelessness; squalor of slums; must be upgraded; housing opportunities expanded. Environmental; housing problems attacked simultaneously/AQMP section potential exacerbate problems those with insufficient income command adequate housing today's market. Long run, better more efficient use land benefit everyone; short run poor be further impoverished. EMP not provided detailed analysis cost result from actions proposed air quality improvement. Plan expected have economically negative effects minorities, low income residents; costs borne local governments implementing fall more heavily those groups; regressive nature property, sales taxes; certain consumer prices (housing); fall more heavily people with limited incomes. Most critical area continuing planning process--cost housing. Looked strong provisions, allay fears housing low income people again pay cost programs benefit chiefly those achieved relative economic security. Chapter II, page 1 says "no plan can answer every question; anticipate every conflict.: No further reference ongoing conflict evaluation; resolution except mention maintaining assessment advisory committee; plan implementation recommendation #9--broad based

STAFF RESPONSE

PUBLIC HEARING
2/1/78--Page 7

Staff notes comments. Most of the issues raised are discussed in the text of the air quality plan.

Goal EMP meet environmental standards; objectives without environmental, economic social effects so severe prevent implementation. Adverse/beneficial impacts policies; actions identified, EMP; and AQMP Tech Memo 15, A/E Tech Memo 4. Purpose review process hear opinions acceptability impacts; aid decision-making on EMP.

Recommendations Congress, State Legislature, AQMP (p. VIII-3) attempt get assistance, mitigate fiscal costs land use management/development controls. Regional Housing Plan advocates housing programs, financial assistance low/moderate income housing opportunities.

Assessment Advisory Committee not intended conflict resolution body. Public participation process; assessment process (using assessment checklist) in continuing planning process identify effects implementation. Affirmative Action Policies goals "...avoid foreseeable negative impacts protected groups; enable these groups take advantage new opportunities created plan implementation..."

Staff will consider specific addition/amendment Affirmative Action Policies in Change Book.

Janet Owens, Midpeninsula Citizens for Fair Housing - Continued

public participation plan. Checklist for assessment; no indication will be used, by whom, what procedures; avenues redress available, if spot critical adverse impacts housing situation. Important assure housing problems not exacerbated. Civil rights groups; those attempting alleviate poverty; forced fight for implementation these recommended actions; if not take such precautions. Energies environmentalists dissipated rather upgrading environment. Poor must alert unforeseen problems; avoided or rectified. Affirmative action plan inadequate. Policy 6 says avoid unnecessary negative social and economic impacts on minorities; suggests are necessary negative impacts; necessary to whom? Those bear burden not see them as necessary. Postpone benefits until can be realized so cost borne those enjoy benefits. Add third action, affirmative action policy: "Avoid negative social and economic impacts on housing conditions, costs and patterns--delay environmental programs until potential housing problems and negative housing impacts can be obviated." Summary urge specify representative body responsible hearing/addressing problems EMP can generate; proceed sufficient caution; foresight so housing not pay costs of environmental upgrading.

Joe Coons, Consulting Engineer, San Rafael, speaking as individual.

Involved in air quality management for 25 years. Chief concern plan gives no indication BAAAPCD will have any flexibility--timing or direction. Need flexibility reflect uncertainties--standards emissions in 1985 without additional control action. 43% reduction from model should be 30 to 60% reduction. Uncertainty suggests do things now need doing can be done; defer actions others; investigate further. New source review in effect since 1975; District staff says reduce their estimate 1985 emissions by some 70 tons/day.

Sara Conner, League of Women Voters of Bay Area.

Written testimony, specific recommendations. League seeks environment beneficial all people; respiratory distress, disease no respecter income, age. Concerned unemployment Bay Area; recognize difficulty assessing impact pollution cleanup among many complex factors affecting employment. National studies indicate overall effect pollution control increase employment. League supports measures make cheaper company, individual control pollution than continue pollution. Water Quality--support most recommendations including Bay Delta Research Program. Support Water Resources Management Committee. Must balance cost total water management against cost new supply. Solid Waste Plan--lacks focus; overall goals; identification policies needing regional approach e.g. resource recovery, waste reduction. Urge specific figures for resource recovery, waste reduction

Figure 28 pg. VI-117 of Volume 1 Draft EMP shows schedule implementation AQMP phased implementation. Schedule BACT provides administrative process time to adopt rules by about 1980, phased implementation 1985. Further flexibility continuing planning process; plan updates.

Written testimony recommending specific changes; additions to Draft EMP policies and actions will be responded to in Volume III (Summary of Public Comments and Responses).

Solid Waste M.P. focus--issues identified county solid waste plans needing regional overview/solutions. Overall goals (p. V-1 of Volume 1, p. 44 Summary): improve existing system landfilling, public health and development large scale resource recovery; advocate waste reduction, materials energy recovery. Staff will consider quantified goals.

Action 6 AQMP inspection/maintenance program consideration; required by Clean Air Act Amendments 1977.

TESTIMONY

Sara Conner, League of Women Voters of Bay Area - Continued

(25% goal or resource recovery). Air Quality--1987 target year attainment met only full implementation complete AQMP. Lacking recommendation vehicle inspection and maintenance program--should be no delay; urge early initiation statewide I/M program. Proposed compactness close present densities many suburbs. Strongly support altering development patterns to reduce automobile travel. Beneficial consequences of inadequately treated; spell out positive terms. In summary, plan describes problems; provides fewer specific solutions than expected. Disappointed EMP not include recommendations long-term institutional arrangements carry out proposed actions. Urge General Assembly improve upon; adopt this regionally coordinated plan.

STAFF RESPONSES

Benefits of the plan are described in Chapter II of Volume I, and identified in impact tables along with plan recommendations, as well as in DEIR portion of Volume II.

TESTIMONY

James A. Cook, California Business Properties Association, El Segundo.

Not categorically opposed indirect source review (ISR); extremely cautious. CBPA developed ISMAP - indirect source model for air pollution : ISR primarily means demonstrate measurable effects on air pollution control. Almost totally ineffectual control of Nitrogen oxide; hydrocarbons. Inspection/maintenance program not directly attack problem of NO_x; address problem at its source. Greatest usefulness ISR determine transitory control of CO; CO least pervasive/urgent vehicle related pollutant; most effected efficient burning speed of engines. Most influential cold start air climates. Indirect sources (commercial projects with parking facilities) don't necessarily create more vehicles; accommodate. Not vehicle miles traveled contributes pollution so much as cold starts, hot soaks, slow inefficient burning numerous stop lights. Parking management (parking tax)---predicated raising funds mass transit; not effecting air pollution. Developers make location decisions basis of market situation and costs. Rising land cost likely restricted development area; other restrictions; detracts from area. Brief flurry interest 3 years ago; considered half states; several put into effect. Virtually every state withdrawn it.

Richard S. Gaines, Clean Air Coalition, Los Gatos.

Many excellent proposals; should be implemented. AQMP not include strategies attain, maintain A.Q. standards all pollutants; recognizes standards (SO₂, CO, NO_x, suspended particulates) may be violated future; not address how avert. 1974 National Academy of Sciences review; no reason make A.Q. standards less stringent; rather tighten up; no margin for safety number standards; NO_x AQMP require more stringent regulations stationary sources; tighten concept BACT. Industry poor record voluntary compliance. Need strict emission limitations; strict penalties non-compliance. Should include SO₂ emission limit 300 ppm; fuel sulfur content limitation of .25%. Strict timetable compliance; put violators on notice. NSR essential; regulations tightened. Ground level monitoring loophole must be eliminated; ignores serious impacts sulfate formation considerable distances original source. No offset policy should be considered unless significant gains cleaner air. Offsets must be same pollutants; same geographic locations. Real villains private autos. Draft AQMP weakest control these sources; relies mainly technological solutions; time again thwarted by auto industry. Gains BACT mobile sources offset growth number cars. Least effective section AQMP transportation controls; must have meaningful auto disincentives; comprehensive public transit alternatives; true cost owning driving auto driven home transportation consumer; full cost pricing. Hertz Corp. cost 22¢ - 28¢/mile drive average-sized American auto; not include cost road repair, traffic controls police protection; expenses caused by auto, paid by general tax funds. AQMP should include full-cost pricing; driver pays time of vehicle license renewal; know what car costs drive; 100 mo. round trip costs \$22 - \$28 + parking. Need commitment public transit. Generally agree land use strategies. AQMP Table 3 (Section IV, pg. 125) shows local government not intend constrain development.

STAFF RESPONSE

Indirect Source Review and New Source Review ensure sufficient hydrocarbon emission reduction attainment oxidant standard; maintenance thereafter; provide flexibility. Comprehensive strategy, bulk air quality improvement; ISR/NSR, incremental reduction or prevention; attain and maintain standard.

Aspects photochemical oxidant plan benefit carbon monoxide situation. CO and NO₂ plans developed CPP.

Indirect Sources not create vehicles; do attract vehicles. Staff analysis VMT does contribute air pollution; vehicles emit hydrocarbons; causes Mr. Cook notes also contribute. Parking tax revenues offset administrative costs and additional transit service costs, other transportation controls costs; structured as disincentive vehicle use commuting. Staff feels experience ISR mixed as several states continue program.

Tasks leading plans meetings other standards proposed continuing planning process. Initial work underway; detailed effort begin immediately receipt CAAA funds.

BAAAPCD implement stationary source program; responsible emission limitations, enforcement, penalties. Staff consider quantified limits in SO₂ planning effort.

Groundlevel monitoring.

BAAAPCD/ARB recently adopted new offset policy specific details nature of allowable offsets.

MTC proposed transportation controls felt reasonable; acceptable. Specific recommendation full cost pricing will be considered in CPP as details of I/M program developed.

TESTIMONY

Bill C. Hern, Peninsula Manufacturers Assn.

Some members not seen documents; most people don't know anything about plan. Lack information about plan costs \$1 billion/year regrettable. Will submit written statement addressing technical concerns.

Believes Bay Area already has share of regulatory bodies; each impacts decision-making private sector--we strongly suggest we need no more.

Concerned recommendations giving ABAG different role lead indirectly from regional government not achievable by direct means. Urge whatever plan adopted, every effort utilize existing agencies in implementation; no new agencies formed, old agencies given new roles; unless no other way accomplish clearly needed, well defined purpose; urge no additional reports required private sector; unless purpose clearly documented by finding overwhelming public need. Know difficulties existing agencies. Believe local control of land use must maintained. Program replete suggestions funded State Federal sources; with funding comes control. Comes down accept Federal plan, hopefully implemented equally nationwide; State plan hopefully implemented equally statewide; or regional plan, higher standards either others; which at most only implemented equally throughout area. One other option--Task Force going down tract; desire plan take account various mandates, State and Federal environmental legislation; same time consider impact on local citizens--lifestyles, mobility, etc. If this cannot be done; we should allow plan determined by State or Federal government Bay Area; State reputation relatively unfriendly to business. Regulations cause retrofitting older plant; doubt continue operation; new plant built someplace else. Regulations causing Bay Area competitive disadvantage; hastens day plants cease exist; will be few new plants replace. Hear EPA committed uniform standards nationally; past experience not always occurred. This plan ensure Federal government enforce standards determined; equally across nation.

Herb Iwahiro, State Solid Waste Management Board.

State Board has an interest in this plan and will be forwarding written comments by Feb. 7 deadline and will present testimony later in Feb. Is concerned with coordinating role for ABAG. SB 424 mandated ABAG develop a regional plan.

STAFF RESPONSE

The Draft EMP culmination 2-year open planning process; extensive public participation; wide media coverage; attempt reach citizens, public officials Bay Area - 7,000 tabloids - Progress Report September, Draft EMP December (Summary, Plan Recommendations, Volume I), 7,000 interested citizen letters and Plan Highlights, all elected officials, city managers, county administrators received Draft EMP, plus citizens, environmental, other special interest groups requesting copies; media, Coverage Plan; workshops, special presentations throughout region; many public hearings.

Staff requests analysis/basis for citation Draft EMP will cost \$1 billion/year.

Plan Implementation Policies (p. IX-27) guided designation implementing agencies. Existing agencies are used. No new agencies recommended. Existing agencies few new roles don't already have needed authority to carryout.

Criteria calling for reports public agencies--close information gaps; serve public interest.

Local control land use maintained--local government carry out land use management/development controls most which currently being carried out some by local governments; plan seeks more extensive application by local governments.

Staff believes Draft EMP is product last option outlined; if General Assembly can't adopt acceptable Plan; it is not issue of allowing; State/Federal government prepared plan will be prepared for Bay Area implementation.

Bay Area; CA not alone requiring existing industries meet air and water quality standards; requirement of Clean Air Act Amendments 1970; various States' Standards; regulations put CA at competitive advantage. EPA Administrator Costle letter (1/31/78) states intent "...vigorously pursue strong, uniform national policy..." to implement CAAA 1977. EMTF and Executive Board consistently requested and advocated uniform national application Federal legislative mandates; will continue do so.

Staff will respond to written comments on receipt.

TESTIMONY

Bob Duffey, Plumbers and Steamfitters Local 393 and President of No. California Pipe Trade Council.

Concerned effects land use plan members citizens of county; how many construction jobs affected. Intends control people's lives; cut down long commute homes to job; restrict construction homes one area move industry another. Problem what happens when people live one area cannot get job close home; must travel work. How can planners be sure people will live close work. Answer relocation; wholesale attempt deprive Bay Area people basic right live and work where chose. Labor movement long fought right to live where choose. Must delete land use plans from EMP. Only two choices--human rights or relocation.

Walter Ward, General Manager, Vallco Park, Cupertino.

Vallco Park 450 acre mixed use development in Cupertino. Strategies balance jobs; housing should be coordinated regional basis. Compact growth plan would complete plan development Vallco Park; an alternate shift VMT allow shorter trips workers within employment-housing area. Cupertino trying balance jobs/housing corporate limits; about Santa Clara, Sunnyvale, San Jose. Cupertino present moratorium; feel housing should go in. Land use regional basis consider grandfathering developments substantially under way. Multiple use aspects reduce VMT employees, shoppers. Vallco favors many land use management recommendations AQMP; vehicle emission standards; inspection; carpooling; public transit. Serious concerns proposed parking standards. Restrictions less onerous planned development areas where trips multiple purposes. Additional public transit available areas people penalized with parking charges. Management practices uniformly applied. Careful analysis alternate behaviors. Parking fees might cause multiple trips, free shopping areas (smaller). Consider eliminate obvious pollution problems--extension certain highways eliminate bottlenecks.

STAFF RESPONSE

The land use management/development controls recommended in the AQMP should not adversely effect construction jobs. The policies would shift development away from areas lacking urban services such as water, sewer, police, fire, schools. In total, 21% more housing sites over the 25 yr. period would be offered under compact growth due primarily to slightly tighter densities recommended after 1985. In addition, the construction industry and other sectors of the economy would benefit from housing rehabilitation stimulated by those proposals. Providing better jobs/housing balances in communities throughout the region will not in and of itself ensure that all residents can find employment in their community but it will increase the probability substantially. The plan does not propose to stop all commuting long distances from home to work but to reduce the need for that phenomenon. There is absolutely no intention to suggest relocation or to interfere with constitutional rights.

The majority of the policies and actions are currently in effect in various communities throughout the Bay Are. They are therefore termed reasonably available controls and as such must be considered in the AQMP. Alternatives such as gas rationing and a Federal or State developed plan rather than one developed by local governments working together to solve environmental problems seems to be a more onerous option than what is recommended.

Staff notes initial comments.

Recommendations for grandfathering sparking "standards," uniform application, deal with specific implementation actions which are the responsibilities of local units of government as they carry out the plan recommendations.

TESTIMONY

Wayne Hoffman, Natural Resource Defense Council.

Will be submitting statement with more detail later this week. NRDC generally supports recommendations. Major concern what not in plan. AQMP bottom-line requirement what is there. All proposed recommendations necessary meet Federal oxidant standard. Land use proposals not just ABAG staff proposals; not anything new Bay Area; 90% proposals current local policy; result primarily water quality decisions made 2 years ago. Only major changes recommended minor changes recommending locations; minor changes density proposals. Most policies presently being implemented. Major concern plan's failure address pollutants other than oxidant. Bay Area designated non-attainment area for oxidant, CO, particulate matter. Major deficiency of plan at this time; does not deal these problems. Are requirements of Clean Air Act; will be required in SIP; proposals not made local government or EMTF; they will be picked up forced on local by State and Federal governments. These issues must be addressed. Particularly concerned SO₂ emissions, particular facilities to 300 ppm in plan. Can expect practically doubling SO₂ level by 2000. EPA investigating levels of SO₂; incidence cancer Contra Costa County. Stationary source controls: urge maintain strong support actions 3 & 4 (BACT on new and existing stationary sources); recommend continued strong support action 4 for NSR. Transportation controls: plan not specify what transportation controls take place between 1985 and 2000 (major deficiency); buried compact growth scenario. Action 11 (increase public transportation by 20% by 1985) not specify transit improvements by 2000; must be specified given possibility land use controls weakened over course plan. What improvements proposed bus-carpool lanes, bridge tolls during that period. Act requires meet oxidant standard by 1982; recommendations consider to meet that standard by 1987 must be in SIP proposed in 1979; should be included/specified now. Land use measures; some transportation controls; implementation measures not adequate. Statutes, ordinances, regulations, etc. must be a part of SIP; left out State/Federal will pick up. Bridge tolls, parking mgmt, and public transportation recommendations far too weak. Tremendous emphasis BACT; stationary source control. \$1.25 increased toll do nothing decrease emissions; 35% parking tax won't have measurable effect decrease in emissions. 20% improvement in public transportation by 1985 woefully inadequate. Costs being imposed terms of pollution from automobiles, number things must be done; disincentives improved public transportation alternatives.

Fearey: What estimate hydrocarbon reduction for attainment due to land use measures; where get citation?

Hoffman: Approximately 50 tons/day between 1985 and 2000. Requirement for achieving standard is 1987. Chart (p. VI-114) indicates what achieved with/without NSR.

STAFF RESPONSE

Staff notes comments.

Development plans meet other Federal and State air quality standards developed during continuing planning process.

Specific comments and recommendations will be addressed in Volume III (Summary of Public Comments and Responses).

TESTIMONY

Wayne Hoffman, Natural Resource Defense Council - Continued

Fearey: Pg. 54 states SO₂ increased emissions not projected result violation Federal standards; if don't violate what is the problem?

Hoffman: Clean Air Act Section entitle prevention significant deterioration; will be part of SIP prepared by January 1979. Legitimate argument address secondary standards; may well be concern local regional government. Can ignore it but requirement in SIP be done. If not proposing control SO₂ at all; are projecting doubling levels of SO₂; can be argued are going violate incremental standards under Part C of the Clean Air Act. Hoffman respond in detail questions in written comments.

Fran Schulke, San Jose Real Estate Board

Compact growth control strategy not guarantee; show probability that development will occur in cities; or will be projected densities. Many cities stopping growth. Staff projection more housing units may be fantasy.

Question why haven't they been built before. Compact growth concept (or infill concept) followed rigidly eliminate competition land availability; create conditions exist in Coastal Zone or Tahoe Basin, produced higher land costs; higher housing costs. Adoption of plan followed by substantial grant powers control decisions locally elected officials; State/EPA controlling funding; will have say about our future. Local flexibility decision-making largely removed; local people deprived facilities, services essential bases ABAG's view how population should be distributed. What does local implementation mean in context plan? Final authority? If locality changes general plan; conflicts with ABAG plan; who has final word? AQMP designates local governments implementing land use agencies; sets region-wide plan. Will Federal government intervene planning decisions local officials? Proper land use planning should weigh environment; needs/ desires local community which must retain ability provide needed services, facilities to residents. Amendments to CAA; EPA cannot directly impose land use controls; why include land use controls in plan? Controlling facilities do not directly pollute; which attract vehicles that do; place burden on property owners; solving problem someone else created. What percentage air cleanup by year 2000 for land use controls? If 4-7%, aren't tradeoffs too high a price?

STAFF RESPONSE

Rune Carlson (ABAG Staff)

Responded plan not indicate higher projection of housing units; plan accommodate same number housing units then alternative - aggregate current local programs and policies. Did indicate by urging higher densities (both urban suburban areas); offer more potential housing sites - about 990,000 this plan vs. approximately 825,000 housing sites; assumes follow-up; build houses on sites. Not restricting (land restriction sense) opportunity to build...

Staff notes concerns.

Staff disagrees that plan eliminates local flexibility and decision-making. Local governments will carry out plan. ABAG is local governments representatives working together to solve shared problems.

Many land use management/development controls currently in effect throughout Bay Area; they reasonably available controls; CAA 1977 requires plans consider all reasonably available controls.

Gene Leong (ABAG Staff)

Noted analysis shows, even assuming BACT (is technology assumed in plan not now available), with technological controls alone not meet standards in mid-eighties and beyond. Improvements in air quality from transportation, land use (though modest); needed part overall comprehensive strategy; reduce total emission burden; achieve standards. Are primarily maintenance measures.

TESTIMONY

Dr. Richard Rhodes, Santa Clara County Medical Society (Environmental Health Committee)

Concerned health effects plan not implemented. Committee basically supports position regional approach. Approve most plan following criticisms and suggested additions: WQMP, (policy 6), recommend on-going studies necessary before new sewers constructed. Policy 8, action 8.7 - recommend further studies show whether surface runoff pollution from septic tanks problem Santa Clara County.

WSMP - will recommend (writing) Santa Clara Board of Supervisors South Valley study regarding water quality existing wells (nitrates; coliform bacteria); study impact increased number of wells; septic tanks in South Valley. Policy 3, Action 3.1, recommend continued research potential uses reclaimed water; keep mind potential hepatitis contamination; recommend research use ozone; water purification source.

SWMP, note absence problem potential nuclear waste management control. Should be addressed in the plan. Oppose this (transportation of nuclear wastes and disposal). Plan need significant enforcement; effective. County health departments have responsibility past; suffered underfunding, recommend adequate funding.

AQMP, should include controls directed towards maintaining SO₂ standards; control sulfates and particulates. Understands ARB recommends 300 ppm (stack level measurements). Currently thinks 6,000 ppm allowed; only ground level SO₂ measurements taken. Area needs more attention. CO control local problem; requires local solution. Santa Clara County major solution find significant alternative means of transportation in hotspots. Action 4 (stationary source controls), NSR; strongly recommends net reduction emissions criteria for acceptance new stationary source compared source emissions being replaced. In general: in proper locations, isolates; inspected properly, septic tanks good solution. South Valley (flat area) easy groundwater contaminated; overuse septic tanks.

STAFF RESPONSE

Specific recommendations addressed in Volume III.

TESTIMONY

Logan Eisele, Bay Area Soft Drink Bottlers Association, San Francisco

SWMP inaccuracies, inconsistencies, contradictions in document. Page V-8, statement "many of the S.W. issues not fully examined will be considered in continuing planning process after approval of initial EMP as additional information becomes available". Concludes staff asking approval policy items without full knowledge of social, environmental or economic consequences of policies. Inadequate input page V-14 - table 2; states "the problems municipal waste are accurate estimates of amount of municipal waste cannot be made because present data limitations". Yet page V-11, plan states "if regionwide programs for separating reusable materials from urban refuse had been in operation in 1975 substantial quantities of materials could have been given a second use..." Is specific data measurement; not mention any aluminum recycled. On pages V-15 and V-16 summaries estimated solid waste quantities generated in Bay Area in 1975, 1980 and 1990--appears estimates completely inaccurate/meaningless if prior statement true.

Table 12, Page V-14 which states "State and Federal government have not actively promoted waste reduction and resource recovery", is total misstatement; page V-3 (under legal mandates) quote (1) Federal Water Pollution Control Act Amendments of 1972, (2) Resource Conservation Recovery Act of 1976, (3) CA Solid Waste Management and Resource Recovery Act of 1972, and (4) the 1977 Litter Control, Recycling and Resource Recovery Act. State/Federal governments have actively promoted waste reduction/resource recovery passing these laws. Paragraph 3, page V-29--states "Section G contains estimates total private/public costs implementing the SWMP..". Policy 9 reads "Federal and State governments adopt legislative; administrative changes promote waste reduction", Action 9.1 "change manufacturing standards and regulations where appropriate". General description states "changes in standards and regulations of manufacturing may be needed to reduce excess packaging, prohibit manufacture certain products, standardize containers, etc. Under costs; total costs (year recommended action) zero. Private costs implementation (capital and operating expenses) not zero. Before policy 9 adopted, someone must find out what cost (dollars and jobs). Environmental impacts, air quality division; says indirect impact resulting from shift in production practices and transportation tasks--is positive or negative impact? Under water quality, indirect impact. States industrial firms may be unwilling advocate these changes; why unwilling? Economic impacts states direct costs-private; then says consumer expenditures and states "probable increase in costs of some products". On page V-29, it says "costs incurred by private industry will most likely be passed on to the consumer ultimately..." If true, under last column (social impacts)--under equity--"no impacts" replaced, increasing costs products have social impact; removes from low income people's ability purchase. Approve incomplete plan; many issues admittedly not fully examined, premature.

STAFF RESPONSE

The issues being referred to on page V-8 are mainly those related to large scale energy recovery systems and facilities planning for resource recovery.

If accurate estimates cannot be made, it does not mean that all other estimates are completely inaccurate and meaningless.

State and Federal governments have not yet provided any substantial general construction or capital assistance programs in waste reduction and resource recovery, whereas billions of dollars have been spent in the Bay Area for water pollution control. Even under section 4008 of RCRA, fiscal year 1978 funding allows nothing for support of local and regional solid waste management planning efforts. It would be difficult to actively promote anything without adequate financial support. SB 650, while providing funds for resource recovery activities, makes no provision for promoting source reduction.

The incremental cost for the Federal and State governments is zero, since they are responsible for writing new laws and regulations anyway. Under RCRA, the Resource Conservation Committee will study all aspects of the economic, social and environmental consequences of resource conservation.

TESTIMONY

Robert Debs, Sierra Club, Northern California Regional Conservation Committee.

AQMP Comments - Two major concerns; deals only of photochemical oxidant; dropped task dealing other contaminants (SO₂, CO, NO₂, Total Suspended Particulates). All pose potential health hazards; especially conversion from natural gas, oil, coal; Bay Area Class II area; significant deterioration air quality prohibited. Don't dirty up air until get to ambient air standards; health hazard level. Goal attainment; maintenance Federal/State standards; contaminant levels below place see health effects; not place want stay. Plan implies dirty up air SO₂, NO_x, TSP up to hazard level. Projections in draft; going allow SO₂ up by 100%, 1985; TSP by 35%. What rules new/modified sources be used? Current situation NSR rules unclear; plan account tradeoffs; whose tradeoffs, what ratio? What definition BACT used? Ambiguous paragraph existing; new sources; BACT; allowing five years. Mean new sources allowed 5 years or only existing sources? New sources, immediately.

Fearey: Prevention significant deterioration provisions; are those health based provisions? Debs: ambient air standards are primary standards; those based hazards health. Fearey: significant deterioration regs not health based are aesthetic standards; visibility, etc. really not subject of this plan. Debs: based on attaining and maintaining ambient air standards.

Appended Answer to Post-Testimony Question From EMTF Member:

- 1) There is a legal requirement that levels of contaminants below the ambient air quality standard level must not be significantly increased:

The Clean Air Act mandates that, if air in U.S. Class II areas such as the Bay Area Air Basin contains less of a given contaminant (or, is cleaner) than the ambient air quality standard (AAS, or Health-Threshold) limit allowed, then there can be allowed no further significant deterioration by the given contaminant.

(Section 127, Title I, PL 95-95, Clean Air Act as amended on August 7, 1977.)

- 2) Even if this legal requirement did not exist, it would be foolish to allow existing sources to "dirty-up" to the AAS limit; since, then, new industries trying to enter the basin would face difficulty in arranging the necessary trade-offs.
- 3) It is our opinion that the Health-Threshold (AAS) limits do not constitute an invitation to pollute the air to the limit.

STAFF RESPONSE

PUBLIC HEARING
2/1/78 - Page 17

AQMP initial plan to meet one air quality standard. Preliminary work currently underway to develop plans to meet other Federal and State air quality standards noted (see Continuing Planning Process tasks pg. VI-161 through VI-167); detailed analysis begin upon receipt CAA funds.

ARB/BAAPCD new NSR rule is recommended; offset policy specific defined in new rule.

BACT to be further defined by BAAPCD during plan implementation. Implementation timetable on page. VI-117 shows requiring BACT on new and existing sources implemented beginning about 1980 to allow administrative rule making time and fully implemented by 1985; NSR already in effect as noted on table.

Specific recommended changes; additions in writing responded to in Volume III.

TESTIMONY

Second Sierra Club Speaker

Emphasis hydrocarbon emissions hampers AQMP tackling problems mobile source pollution. General support most actions proposed, especially indirect source review. ISR included Policy 2; relates mobile source control. General support Actions of Policy 2 are relatively weak; not aggressively address mobile sources; force bulk burden on industrial point sources; EPA Administrator said auto. noose around neck of economy. Weak in areas transit development; fully assessing true cost of automobile to motorists (removing subsidies automobile users). Detailed copies will be sent in writing.

Dick McDonald, Santa Clara Valley Contractors Association.

Support the goals of the EMP--find positive solutions problems air pollution, water pollution and supply; solid waste disposal. Fundamental problems plan's approach/scope; primarily land use management portion AQMP. Section generally consistent Santa Clara Valley present policy; could lead significant lifestyle changes. Be sure what proposed; effects.

Section proposed improve air quality by changing growth trends; admits direct effects l.u. controls appreciable. Economic impact disrupt normal market forces; raise taxes; housing costs, create hardships large segments population. Being asked accept assumptions; arguments, conclusions; change traditional land use decision-making into Federally-enforceable land use regulation based on incomplete/inconsistent data. EPA Washington come in, abridge right local governments; citizens determine own density. EPA was directed not require land use management plans; asked include voluntarily; cause more problems; solves; leaves too many questions unanswered. Question public versus private financing plan; what percentage added costs must industry absorb; non-transferable cost doing business; what collateral effects denying industry ability expand; actual rise taxes specific areas; why hasn't more complete economic analysis, impact plan been prepared? Is ABAG institutionally strong enough carry out; broad, comprehensive, controversial plan? Unless questions answered; cannot support land use management aspects plan. Urge deletion land use plan from final EMP.

Larry Orman, People for Open Space

POS supports plan in all aspects; particularly land use control measures. Suggestions that EMTF; ABAG staff attempting impose upon Bay Area massive governing structure undemocratic; take away all personal freedom; careful reading plan does not bear this out. Task Force; staff have no intention letting this occur; especially since task force consists over 1/2 local government representatives. Goals established by U.S. Congress, reaffirmed 1977 Clean Air Act Amendments; 1977 Clean Water Act Amendments; reaffirmed by State Legislature.

STAFF RESPONSE

Written comments are responded to in Volume III.

The land use transportation controls are part of comprehensive strategy to meet Federal oxidant standard and especially important maintenance standard long-term. Clean Air Act Amendments 1977 require consideration all reasonably available controls. Land use management/development controls recommended currently in effect somewhere Bay Area; therefore considered reasonably available controls. Local governments continue decision-making land use issues. The impacts of AQMP policies discussed detail AQMP Tech Memo 15, Assessment/Evaluation Tech Memo 4.

Staff notes comments. No response required.

TESTIMONY

Larry Orman, People for Open Space - Continued

Basic concern of POS since 1958; do not have sound land use pattern that conserves natural resources; allows cities function efficiently. Supported ABAG regional plan, adopted ABAG General Assembly (local government) 1970; called equivalent compact growth alternatives described the EMP. EMP land use measures consistent with current regional policy. EMP goal (land use part); shifting growth to cities; increasing job-housing mix; proximity jobs to housing--valid goals regional planning land use controls; consistent with objectives; need of region. ABAG Series 3 projections based almost solely local government predictions of future growth that demonstrate clearly; running out easily developable land. Concerned long-term impasse; continued current low density development trends. Look Bay Area; coming close limits of development; in frontier situation. Land use control measures recommended not unusual; POS not support land use controls arbitrary required local government. These land use controls not arbitrarily required of local governments are set in package where local government determining how applied. They justifiable; regional point view. Bay region integrated region--economic flows, transportation flows; environmental considerations all demand regional viewpoints. Plan affects lifestyle; necessary but not massive. If land use controls dropped; the 4-7% reduction hydrocarbons not achieved; maintained 1990; where will make up difference? Will labor unions support additional controls on industry; additional new source review controls? Cut one section plan out; not able meet other parts; Federally mandated standard. Two-thirds density increases, according ABAG projections, contemplated newly developed areas; not talking about building massive high-rises central cities.

Cost assessment land use control measures must look whole picture what impose area citizens. Short-term benefits land use control measures not large; long-term impacts 20, 50, 60 years; are substantial. Talking about large infrastructure decisions made next 5-10 years; will determine next 40-50 years land use patterns Bay Area. In general, POS supports recently prepared Santa Clara County staff recommendation on land use controls; it clarifies land use issue better than current plan.

TESTIMONY

Mike Nye, Central Labor Council, Santa Clara County

Recognizes time lines imposed Fed. Govt. made difficult ABAG staff. Unanimity water; sewer portions plan. AQ, look assumptions. Grant difficulty estimating variables; look few clarify some issues. Increased density and more mass transit laudable objectives. Plan indicates cutting commuting down; people live closer jobs would help; no argument with objective; assumes only one breadwinner in family; know majority families require two breadwinners. Fallacious assumption both will get jobs near housing. Potential Fed. standards (stationary and mobile sources); not sure what will bring future. Believe should pause; take closer look at sections of report could be implemented now; those could be implemented later when have more facts base judgment. What exact reduction vehicle miles travelled does compact growth scenario envision? How calculated? Commuting only 1/3 usage of cars. How model correlated with similar model, e.g., the Caltrans one? This part plan seems backdoor way regional land use policies. Argues not with objectives; with methodology. Urge reconsider methodology.

Charles Gunn, 409 Alberti Way, Los Gatos, speaking as individual.

Member Modern Transit Society made plea public transportation; fixed guideway type; part solution air quality controls where pollution caused by automobile. Automobile main culprit; caused shopping centers; sprawl; zoning difficulties. Learn other countries; shopping centers (Newcastle, England) located by railway stations; generate more traffic than dept. stores. What would happen another oil boycott. People object fixed guideway transportation as inflexible; may be advantage; could have high density development along fixed guideway; get to station bike, electric cart; all less polluting than automobile. Venice comfortable town to get around in. Parkinson's book entitled "The Law" said "the motor car destroys what the driver comes to see". Maybe do it better somewhere else--we are slaves to automobile.

Bob Hackamack, Sierra Club (Water Resources Committee)

Plan covers large area (radius of approx. 130 miles); live Modesto; what you do affects us in Modesto. WSMP, page IV-24, table 5 lists possible new sources. Don't look Fourth Barrel Hatch Hatchy project ahead of conservation, reclamation measures--cost same or less; cost to Valley too great to permit it built: unacceptable environmental damage Tuolumne, San Joaquin Rivers; water rights to export additional water doubtful; increased safety supply by using alternate routes. State Dept. Water Resources recognizes same drawbacks Fourth Barrel. State's letter to San Mateo County on Co., draft "Water Resource Management Plan" refers to Draft EMP. DWR letter says will "oppose Fourth Barrel unless can be demonstrated (1) adequate water rights exist; (2) water conservation program fully implemented, enforced; (3) all practical wastewater reclamation being carried out, not just planned; (4) no other reasonable method bringing new water into area via Delta, by exchange, direct delivery." Knows San Francisco will not agree; but live in larger community than that served by S.F. Water Dept. Must consider effects water supply decisions on larger community. Sierra Club concerns about environmental impacts each four other new sources listed page IV-24. American River Diversion doesn't pass through Delta; Warm Springs water rights problems; good possibility cheaper water from groundwater in area. Urges WMCC look reducing 60

STAFF RESPONSE

Plan does not seek to eliminate all commuting. Seeks provide better jobs/housing balance; more opportunities to work close to residence; encourage use transit; carpooling, etc., for commuters.

The schedule for implementation for entire plan & AQMP staggered over-time. Many control measures already in effect in region.

Compact growth development pattern reduced total VMT in region (by year 2000) by more than 10 million VMT, reduction 11% over current programs.

MTC responsible for model as transportation planning agency Bay area.

Staff notes comments. No response required.

Staff notes comments. No response required.

TESTIMONY

Mrs. Jessie Bracker, 317 San Pablo, Millbrae, speaking as an individual.

Things too complex (this plan); sight simple logic life free country like America temporarily lost. In Ch. IX, page 9, recom. #2 it reads "Where current legal authority for carrying out plan recommendations does not exist, enact legislative changes to obtain such authority...". Sounds like direct command; rather finding out what people want. Ch. IX, pg. 6, reads..."because EMP is a regional plan, overall responsibility for coordinating and integrating its implementation should be at the regional level." #8, same page, says..."environmental decisions should take into account non-environmental factors." Mean everything controlled environmental decisions regional level? Eradicate local governments? If so, how gain local input from the local people? Decision making process should allow extensive citizen participation. Majority plan good, except air quality plan. Lot priority items being mixed; drowning red tape, taxes, controls, new legislation; top that Ch. VIII, pg. 3, calls ABAG support legislation achieve compact development Bay Area. Don't know what worse: people congestion, automobile congestion. Have both; already too compacted most places San Mateo Co. More compact; more air pollutants smaller area; too many people overly saturate area; no longer desirable place live... Believe single family homes wherever possible. AQMP blank check, new legislation local people taxed more; must be unconstitutional. Ch. VII, pg. 3, table 1, comparison population projections with/without compact development. Totals same; different distribution/county. Ch. VII, pg. 2, states "compact devel. projections were used as the basis for recommendation in the plan". Why, what right concept present, modern land development patterns changed to compact development base for this plan? Proper legal public hearings at each City Hall in 9 counties should be necessity for making such change. Ch. VIII, pg. 3, reads "the legislative recommendations... are drawn from the action statements for the compact growth policies of the air quality plan recommendations." Recommendations 5, 6, 7, 8 and 9 to Congress and #7, 8, 9, 10 and 11 to CA legislature should be omitted; all references, policies, actions compact development/land use should be deleted. Deadline Jan. 1979; such extensive plan shouldn't be rushed through. Ch. 7, pg. 6, says "changes in AQMP recommendation--says one change was made to achieve compact development--an action was added that no Federal or State grants be given for sewerage facilities whose timing or capacity would be inconsistent with AQMP recommendation." Local taxpayers tired paying for expensive planning studies. Pg. 42--says "encourage water savings...revise water rate structures that result in lower unit costs to large water users. Word "large" should be changed to "small". Large users use more water if costs them less. Car engines getting worn by emission controls; anyone care? Says increase bridge tolls \$1.25 peak periods; 75¢ enough. Agricultural-water conservation program (action 2.8); plants won't grow without sufficient water. Why not attack industrial water usage; why not say something about air-planes, boats emissions?

STAFF RESPONSE

Statements call for coordination and integration implementation at regional level; many recommendations carried out at local level; no attempt to eradicate local governments. Calls for consideration environmental, institutional, financial, economic and social impacts of environmental decisions at all levels of government.

Plan development process as well as formal decision-making process allows extensive citizen participation. Draft EMP two year planning process open meetings, public workshops, media coverage, meetings, citizen representation task forces and advisory committees, newsletters, public hearings.

Draft EMP policies would accommodate Bay Area year 2000 population range 5.4--6.1 million people. AQMP transportation/land use management recommendations seek reduce hydrocarbon emissions through reduced vehicle miles travelled (especially single occupant private auto use work commute purpose) also increased transit availability, efficiency and traffic flow improvements. Compact development patterns necessary component meeting air quality policy objectives; plus meeting/maintaining oxidant standard. True for both high and low population projections. Actions proposed land use management/development controls currently in effect somewhere in Bay Area. Therefore are as much current development patterns as opposite pattern, also current pattern many jurisdictions Bay Area, urban sprawl. Compact development recommendations considered reasonably available, necessary to reduce vehicle miles travelled, support transit use, result in substantial cost savings local governments in service provision (e.g., water, sewer, police, fire, schools) etc. Public hearing process provides opportunity citizen/private industry/public agency comment. General Assembly vote determine local governments willingness apply compact development policies in region.

Deadline Jan. 1979 is for State Submittal State Implementation Plan (air quality) to EPA. AQMP Bay Area only; have to be updated for SIP, must undergo public review, hearings, approval process by Jan. 1979. Draft EMP scheduled submission to State agencies (SWRCB, ARB, SSWMB) April 1978 to EPA October 1978.

Pg. 42 of Summary (p. IV-34 of Vol. I) - Staff notes error; wording should be "...revise water rate structures that could result in higher unit costs to large water users."

Agricultural conservation measures aimed reducing over application irrigation water--estimated 20% of total water applied.

Industrial water conservation also recommended.

TESTIMONY

John Holtzclaw, 1508 Taylor, San Francisco, speaking as an individual.

Land use controls not go far enough encouraging efficiency land use, saving agricultural lands (and jobs), energy use thereby decreasing unemployment. One reason unemployment so high reaction Federal Reserve Board inflation pressures; react by tightening up money supply, causing increased unemployment. One inflationary pressure decrease value collar. One cause inflation poor balance of payments; major source energy imports (oil and gas). If eliminated these imports, would have strong positive balance of payments. Very real way, whenever waste energy; increase unemployment. More dense development saves energy--transportation policies should be strengthened--health; jobs at stake.

Dr. Lowell S. Oxsen, San Jose, speaking as an individual.

Here listen; possibly reject or going through anyway because Fed. govt. mandated something? Land use controls should be eliminated; arguments favor inclusion erroneous. Hundreds thousands acres CA never been touched. Dams Santa Clara Valley provide water because foresight; built well; without ABAG/EPA. How many have expertise local governments built these dams, built water supplies Evergreen, then took them over. Local agencies did this with staff engineers. Couldn't build these dams today--EPA would stop you. Really need transportation system built next 20 years. Should put 15/20% people on rapid transit. Public wants transportation. Cannot take away freedom of choice people want move into California; address the reality.

Dr. Kenneth Hayes, 1155 Emory St., speaking as an individual.

Statement additional water supplies will be needed--brings out Peripheral Canal; nothing further said; should be. If Peripheral Canal removes water (particularly if we need additional sources); either it should be opposed; should be guarantees built into plan, spell out Delta water quality not deteriorate. Study use of reclaimed water enlist State Health Dept; spur study problem viruses in reusable water. Health Dept. says not enough money; matter budgeting funds Health Dept. do essential studies (viruses, etc.; possibility using ozone as water purifier); support their doing studies. Problems SO₂; particulates should be in plan; this will be future problem. Main SO₂ polluters along Bay Delta; wind blows emissions to valley. ARB concerned; recommends BAAPCD more strict monitoring. Predictions BAAPCD, oxidant levels improve--cleaner cars; improved techniques stationary sources; but after 1985 will increase relation population, car useage increases. PGE switching over natural gas to oil; site location along West Bay (Redwood City) might well be SO₂ combination with particulates; added problems. Can have lower levels both contaminant, higher quantity may not. This is significant omission.

STAFF RESPONSE

PUBLIC HEARING
2/1/78--Page 22

Staff notes comments. No response necessary.

AQMP Tech Memo 15, Assessment/Evaluation Tech Memo 4 discusses energy savings and employment effects of AQMP.

Staff notes comments. No response necessary.

Action 2.2 Water Quality Management Plan addresses water quality in Bay Delta System.

One possible study topic for Water Management Coordinating Committee (WMCC) effect of any one water supply project on water quality.

Wastewater reclamation and reuse underway U.S. for at least 30 years; numerous studies conducted/continue, research National/State level. Five year multi-million dollar study of health effects using reclaimed wastewater (on food crops, agricultural workers) underway Monterey Co. by USEPA & SWRCB. Regional Wastewater Reclamation Study soon begin would use available research, data on use, effects reuse of reclaimed wastewater.

AQMP portion Draft EMP plan for meeting and maintaining Federal photochemical oxidant standard. Pg. VI-161 through VI-167 describes continuing planning process tasks leading to: (implementing/refining) photochemical oxidant plan; carbon monoxide plan; nitrogen dioxide plan; plan for total suspended particulate matter; sulfur dioxide plan; plan for other State standards (lead, sulfates, hydrogen sulfide, ethylene).

Synergistic effects as described--SO₂ combined particulates--recognized; State standards require recognition/plan development based on synergistic effects of two pollutants in combination; continuing Planning Process analyze to develop SO₂ and TSP plans.

John Lambert, Modern Transit Society

Pleased planning for future environment; been helter-skelter from things do pleasure, profit; cannot continue. When stole land from Indians, had pristine rivers, lakes; clean air; most land resources gone; why in critical situation now; turned resources into things: buildings, paving, machines, etc. Now buying resources from abroad. Not realistic say continue way have past 300 years. Money always at base things must consider. Current U.S. expands roughly \$160 billion/year on medical services; someone says let's spend \$18 billion clean up environment; we say where will get all that money? (\$18 billion figure is from article called "Hidden Savings in a Cleaner America" by J. Kimball in National Wildlife Magazine, Feb. 1972.) Kimball says cost air, water pollution \$51.9 billion/year; Draft EMP reasonable cleanup program about \$18.3 billion; that is a \$39.8 billion reduction in amount cost to us. Every dollar spent pollution control; get back \$2.18 actual decreased cost of wheezing lungs, etc. Wise investor would say very good deal. 1978 family four would save \$800 pollution costs by investing \$370 pollution controls. Four Draft EMP goals are reasons society supports good transit: 1) make air more healthful breathe, 2) reduce smog so farmers urban areas can again grow smog-sensitive crops, 3) ease downtown congestion by creating auto-free pedestrian zones; improving transit, 4) reduce commuting distance by controlling sprawl surrounding cities. Region pays very dear price for having longest commute in nation. Highway commuter (expects 2 lanes of freeway if lives 10 miles from work) is subsidized at rate of \$1,300/year; if lives 20 miles from work subsidized rate \$2,600/year. Anyone loves a subsidy. Put more accent on transit in plan. Regarding jobs: Plan figures out at about 1 job for each \$60,000 spent; is ridiculously high figure; actually should be creating 4 jobs that amount of money. Plan notes 5,200 jobs/year construction industry by 2000; 5,000 permanent jobs; jobs create other jobs; where that figure? Inconsistency - Federal studies show pollution control increases employment; following page say with this plan number jobs go down by 1%. Believe jobs will actually increase. Make goal 30% for transit riders; cannot abandon that goal. Cannot say air, water quality continue improve just because has improved since cleaned up worst offenders; as population increases air, water pollution increases if don't do something. Not two sides to every question; two questions. Clean air, clean water only one side; let's get with it.

Lowell E. Grattan, Monte Sereno, speaking as an individual.

Questioned accuracy of projections. 1960 County Master Plan projections way, way too high (30-35% higher). BART (now, 10 years later) to be carrying 10% traffic Bay Area; carries something like 2%; was financially carry itself. People did best projections could; were not 50% wrong; 80% wrong. Keep that mind. Cost controlled growth - San Jose have circle around city (inside the line can develop; outside cannot). Only IBM plants permitted in specific areas. (Coyote area); land there sells \$8,000/acre; 1/2 mile northward across magic line, land selling \$80,000/acre; 10-fold increase purpose controlling growth. Fact, not fiction. Third point, overactive enforcement; define "restrict development"? Wealthy enclave developing along Coast; radical enforcement. That could happen with this plan. Environment improving; continue improve; continue study another year; get more costs; more information; make decision year from now.

• Staff notes comments.

Employment estimates pg. II - 19 Vol. I and p. 23 Summary rough calculations of many; not all employment benefits of entire plan (e.g., figures not include employment opportunities housing rehabilitation associated with land use/development controls). At best, indicate direct employment effects; no attempt calculate multiplier or "rippling" effects of direct employment benefits (e.g., for every 1 job created basic or export industries - agriculture, mining, construction, manufacturing) will be more than three jobs in service sector - wholesale, retail trade, real estate, finance, insurance, transportation etc.). Underestimates employment benefits from plan and the 1% figure referred to (p. 24 Summary; II-9 Vol. I).

Suggested quantified goal of 30% transit ridership can be considered by MTC and EMTF for inclusion in final EMP.

Staff notes comments, concurs that 20 year projections involve uncertainties. Population, economic, land use, transportation, environmental quality projections use state of art techniques; based set assumptions; trends, trend analysis etc.; portray future situations; aid current decision-making, plan for future; reduce costs (environmental, economic, social) avoiding problem solving until problems irreversible; require massive monetary, social costs to correct.

Never eliminate uncertainty; risk factors. EMP due State agencies April 1978, Federal government (EPA) October 1978. Plan will be revised, updated through continuing planning process; flexibility incorporate new data, research findings, standard revisions, etc., make appropriate changes.

TESTIMONY

Jo Kurz, Secretary, Santa Clara County Landowners Association

Represents people own land outside magic line. In Santa Clara County taking private property; private prop. rights by regulations, zoning techniques; notion all land in public trust. County should brag about high cost living; ever increasing cost housing.

Recognize need goals of EMP. Rid us smog-majority not spawned this county; assure clean water; adequate supply all times; provide disposal of garbage. Are regional concerns; should be worked out cooperative manner. Plan indicates will have utopia for planners; regulatory bureaucrats; costs taxpayers money; and politicians. Threat sanctions nothing new. Mixture of land uses advocated. However, Section VI-125, "not all actions will be required of every city or county"; seems exclusionary tactics via zoning techniques. Rehabilitation invariably causes dislocation without provision for housing. Only massive subsidies provide rebuilding; continued operation housing for poor.

Mary Anne Mark, 725 Cowper St., Palo Alto, speaking as an individual.

Served State Water Resources Control Board Reclamation Task Force, Governor's Water Law Commission, active member Water Committee of Commonwealth Club, and A.S.C.D.

Generally supports water, solid waste plans. Water Supply: goals economic efficiency; minimum environmental impacts sound. Strongly supports early implementation goals water reclamation; conservation; strategies agree with State constitutional mandate avoid waste water. Consider recommending the Health Dept. set uniform water criteria based on use; elimination source of water (e.g., reclaiming water) as criterion. Supports recommendation improved groundwater management; interagency coordination; feasible interties; encourages reasonable use risk analysis for water supply planning. Supports plan recognition uncertainty; need consider supply alternatives. Concur establishing Bay Delta Research Program. Water quality plan should recognize beneficial effects marshes, wetlands as water quality control facilities. Suggest reconciling statement pg. 15 concerning investments in pollution control, with statement pg. 23 that new jobs will be created in construction of pollution control facilities. Spinoff industry from pollution control is large. WQ and Surface Runoff proposals should include implementation schedule with milestones for measuring progress.

Robert Mark, 725 Cowper St., Palo Alto, speaking as an individual.

Good effort; real need for regional planning environmental matters. Plan could be stronger. Pleased plan addressed problems urban sprawl. Hopes (regarding air quality standards) will not conclude air pollution levels below primary standard are acceptable; have no impact on health. Probably the case (has not been disproven) there may be no thresholds for level at which air pollutants affect health. Do not proceed allow air quality to deteriorate up to primary standards on assumption that that is only level where health effects occur.

STAFF RESPONSE

Staff notes comments.

Direct quote refers fact many cities, counties already carrying out plan recommendations or specific action (e.g., improve street sweeping) not applicable to particular jurisdiction (e.g., rural jurisdictions without curbs and gutters).

Plan recommends need augment fiscal capacities successful relocation, housing opportunities for low income and minority groups; advocates State and Federal legislative action/aid (p. VIII-1 through VIII-3).

Staff notes comments.

Staff notes comments.

TESTIMONY

Mike Richter, speaking as an individual.

Spent \$4.3 million studying for two years; still many facts, figures disputed. Why don't get started? Have a good plan; something get started on. Easier study things already occurred than study what might happen; let's start something; study effects; can work on trial, error. Recommends indirect source review for all major projects; review these things as come in; more emphasis on transit.

Jeff Norment, 1443 Sallecita Street, San Jose, speaking as individual.

In 1995 will be 40; life begins at 40; would like begin life right. Supports much of plan. Very concerned that resources be 1995 and 2000; ability get around is there; that water is good quality, enough to drink. Prefers that deal with these problems now; still have chance. Letter submitted to EMTF (and testimony presented) by some Bay Area recycling activists--supports their position on solid waste. Recommends task force seek legislation for statewide bottle law.

Marge Sutton, Northern California Regional Conservation Committee, Sierra Club.

Strongly supports land use portions document. Appears Santa Clara County model; already gone long way toward implementing concepts of these policies dealing with urban service areas; compact development. This plan describing things counties Bay Area in process doing rather than mandating, strongly encouraging new things. Hopes role ABAG one helping various counties, cities in region coordinate activities; giving assistance implementation of policies; provide pool of information assist local governments trying address problems adequate housing; jobs for people way that makes best use land. Relationship between State Urban Development Strategy; Santa Clara Corridor Evaluation Study be looked at so they enhance one another; not contradict. Respect the rights, needs local agencies; hope ABAG find way assist local agencies in implementing these policies; gain their endorsement, support.

Mike Walton, Associated General Contractors of California (Santa Clara District).

Preponderance AGCC work bid; perform in Bay Area, S.C. County. Assn. no means adverse planned, balanced growth providing social, economic, environmental impact variables carefully reviewed, speedily administered. AGCC worked hand in hand with San Jose, S.C. County field affirmative action, input into noise pollution program; desire continue this direct association. Feel ABAG controls through regional planning create another bureaucratic layer causing delay of projects.

STAFF RESPONSE

* Staff notes comments.

Staff notes comments.

Staff notes comments.

Staff notes comments; notes that local governments will carry out plan; will retain current responsibilities for land use decisions in their jurisdictions.

TESTIMONY

Mike Walton, Associated General Contractors of California (Santa Clara District) - Continued

Public projects construction delays result increased costs borne by local taxpayer. Private project delays cause removal of business' plans to locate certain localities. Feel local government entities should retain jurisdiction over land use management; they are in best position judging true impact land use determination. Favor omitting land use section. Fully endorse Councilman Pegram's Jan. 18th analysis; recommendations.

Mike Bullock, Santa Clara Valley Bicycle Association

Agree with desire increase bicycle use. SCVBA established priorities: (1) education, (2) parking, (3) room on road, access, (4) bike transit. Main deterrent more bike use fear traffic; lack safe parking for bikes another deterrent. Two percent population Palo Alto had bikes stolen 1974. Only 20% Bay Area population rides bikes. Ask cities amend off-street parking ordinances require bike parking to auto parking. Potential bikes offer in cleaning up air larger than plan states. Vallco Park Traffic Reduction Study determined 3.9% employees claimed usually rode bikes to work; 11% student body at DeAnza College ride bikes school. Homestead High (2,200 students)--over half ride several times week to school. Most these high school students will not continue riding bikes because do not feel safe on road. Most accidents between cars and bikes occur in intersection. Ask experienced bicyclist about measures are considering--only way get best information. Endorse legislation require deposit on beverage containers; at national, State, county and regional level. Has worked State of Oregon; would in effect widen road. Incredibly layer garbage along roads. Ninety percent people Oregon support their bottle bill. Amendment from Santa Clara County step right direction; would like stronger wording, specific date not far in future. AQMP, too little, too late. Personal right to breathe clean air is basic right. Plan lacking full cost pricing; should look ways bring free enterprise into field transportation. Any transit mode, inefficient not stand up under full cost pricing techniques; gives freedom choice to people.

Edmund F. Petersen, III, 433 Forest Avenue, Palo Alto, speaking as individual.

Basically agrees with plan; recognizes gray areas. Plan not employ mass transit as much as should help clean up the air; in particular rail transit (light and heavy). Electric buses would help air quality; efficient terms maintenance. Transit systems much cheaper implement than building more freeways. Plan fails recognize unfair subsidy car versus rail systems; transit cannot compete with something so heavily subsidized by govt. as highway system. Plan should endorse measures so automobile user more fully appreciates cost using automobile. Transit could draw from gas tax fund. (Statistics on full cost pricing or automobile available.) Put transit on equal basis with automobile. Transit would help solve problem of "hotspots"; more dense population, more suitable rail transit.

STAFF RESPONSE

PUBLIC HEARING
2/1/78--Page 26

Staff notes comments.

Staff notes comments.

TESTIMONY

Bob Marr, Operating Engineers Local 3.

Senior citizens no longer afford live homes lived in all their lives; cannot survive in California on fixed incomes, having leave State. Study in Alameda County show companies left Alameda County particularly; went out county, State, region; everyone ranked regional government; State interference from 3rd to 1st reason leaving. First concern; don't create another layer to further delay developments; if plan adopted; let's go Sacramento do away with legislative LAFCO proposal. More places need permit; more places will be tied up in court over EIRs. Create urban squeeze to stop urban sprawl; create high density area in urban center; law enforcement is the pits; crime rate astronomical compared to suburbs. Look at social impacts; people living too close together.

Shelby Williams, representative of California Association of Realtors
In 7 cities in Santa Clara County.

Like county way it is; freedom develop land; seek a job. Real estate industry concerned about force of managed/directed growth. Think instead quieter approach; enables changes take place; better than simply increasing bridge tolls, etc.; too rigid. Against squeezing housing into certain areas. Concerned about plan's controlling industries in areas. Prices housing; lots gone sky high; partly due land use legislation. People want live in neighborhood environments; give people choice; stop trying manage our growth.

Councilman A. Frosolone, Mt. View, speaking as individual.

Plan represents power grab by group not directly responsible to voters. Should have full-blown legislative hearing for such important, and controversial plan; or electorate approval. Why hurry this so? Feds and State will do this plan only if voters allow it. "Central planners" are alarming. Two reasons we do not need "central planning" such as plan proposes: the loss of local control; the resultant chaos. Dade County, Florida, and New York City are two examples.

Lilyan Brannon, United New Conservationists, speaking for group and
as individual.

Air quality controls desperately needed Santa Clara County; receive region's air pollution from north. Concerned problem with by-products of semi-conductor industry; should be addressed by plan. Architectural constraints take advantage prevailing breezes should be addressed; ambient air temperatures affected by air conditioning. Supports controls, incentives, disincentives that direct citizens toward public transit; alternative to private cars; regional study should be done showing full

STAFF RESPONSE

Staff notes comments.

Staff notes comments.

Staff notes comments. Plan is required by Federal law. General Assembly adoption represents local governments' way of indicating how they can respond to environmental laws and regulations.

Staff notes comments.

TESTIMONY

Lilyan Brannon, United New Conservationists, speaking for group and as individual - Continued

cost pricing of private auto use. Any new major development should be tied to rail transportation; bus service. Nothing as efficient as trees for purifying air; efficient consumers carbon monoxide, absorbers other impurities. Nothing plan addressed benefit trees. Trees open spaces major oxygen producing factories of nature; equalizers climatically. In urban areas trees virtually lifesavers. Real need specific policy; regulation protect urban forests. Need provide linear parks along creeks utilizing flood plains. San Felipe project will contribute deterioration Delta water quality; supply. Why should one region be allowed diminish another region's water supply; quality? ABAG has data management properties; information they should share with Water Quality Control Board. If Board not function as should; ABAG should take over water quality function. Hope ABAG will streamline solid waste policies; concerned with handling hazardous wastes; education important on problem. Agree with policies 13, 14, 15 and 16--seek legislation; proper administrative action to remove tax benefits for use virgin materials.

Paul Cahill, Regional Citizens Forum

EMP was subject Forum meeting. Members believe using EMP accomplish regional, social, economic engineering; ABAG planners vested interests; cannot be objective; all central planning suspect. Forum passed two resolutions: 1) ABAG's EMP promotes strategy antagonistic to individual choice, to economic system, structure of local government; believe imposition centralized governmental plan stifle economic activity Bay Area already dragging; crowding policies (putting people back into central cities) will force up rents, price of housing, tax assessments, further aggravate urban problems. Plan choke out community decision-making; place governmental authority ultimately hands of regional, Federal bureaucracy. Plan fails thoroughly provide analysis economic, social costs of implementation. DEIR is totally deficient. Approach fails explore fundamental possibility adjusting Federal standards. Should be adequate time develop alternate approach to environmental problem solution consisten with traditions--free markets; institutions of local control. ABAG provided unsatisfactory information; charging \$13.50 for two volumes blocked citizens from ready access to essential information. Review time is totally inadequate. Process is sham.

STAFF RESPONSE

The environmental, institutional/financial, economic and social impacts of all policies and actions are identified in Volume I on the plan recommendation tables and in the text; in numerous technical memorandum and special reports.

The plan will be carried out in large part by local governments; ABAG proposed only as coordinating agency; other regional agencies continue carry out their statutory responsibilities.

Staff cannot respond to vague references to the inadequacy of the entire DEIR. Specific comments will be responded to upon receipt in the FEIR.

Adjustment of Federal laws occurred in 1977 (Clean Air Act Amendments 1977, Federal Water Pollution Control Act Amendments 1977). Continuing planning process provides flexibility to change recommendations when and if Federal standards change.

All documents have been in public libraries in each county since the first week of January. Many groups, for example Regional Citizens Forum, have received several free copies of the documents. The planning process spanned two years; extensive public participation and completely open process and remains so.

TESTIMONY

R. Mortenson, Treated Water Contractors and Regional Water Companies,
Santa Clara County

Voluntary group key management, both public/private water agencies in county. Concerned with water supply element of plan. Plan recommends creation voluntary Water Management Coordinating Committee. What if not voluntarily agree? Will be coerced? Water Supply Plan price tag not too great for studies, reports proposed; large degree doing what doing already. Costs somewhat significant; in order \$4 million over ten year period of program.

Hearing adjourned at 1:45 a.m.

STAFF RESPONSE

General and specific comments submitted in writing will be replied to in Volume III (Summary of Public Comments and Responses).

GENERAL ASSEMBLY - 2/8/78
(Berkeley)
Public Hearing Testimony on Draft EMP, Draft EIR

TESTIMONY

Chaired by Supervisor Rod Diridon. Began testimony at 3 p.m.

Supervisor Joe Bort, Alameda County, for Metropolitan Transportation Commission.

A memo of understanding between ABAG, RWQCB, BAAPCD, MTC states each organization with implementation responsibility will take care section of plan dealing with their statutory responsibilities. MTC primarily deals traffic control measures. Subcommittee adopted recommendation on those sections; not final position; recommended position of MTC Work Program Committee. After comments, this recommendation will be made to MTC Board for final action on those sections.

MTC largely supportive of recommendations made; feels should set goal 35% increase in ridership. Would be biggest element reduce air pollution; will absolutely require additional support, State Federal level.

Councilmember Janice Fulford, City of Pacifica.

Pacifica Council recommends no new agencies created implement 208 plan. Pacifica experience inconsistencies, divergent requirements, different agencies on same project. Plan should be coordinated through ABAG, no new authority, functions. Urge adoption recommendations submitted by San Mateo County City Managers Assn. including proposed policies A through O Air Quality section be adopted as guidelines rather than policies. Policy P adopted as umbrella policy regarding land use in that section.

Angelo Siracusa, Bay Area Council, Executive Director.

Bay Area Council been involved with project from beginning largely because believe was opportunity local governments look Federal statutes; determine how local level could respond to them. Appeared Federal government (EPA) acknowledging economic, social issues were of public value. Also allowed local people (primarily elected) make decisions. Alarmed at letter Air Resources Board, shows arrogant disregard for what's been going on; is not-too-veiled threat that if we don't do it, they will; that flies directly in face of charge given us.

Concerned 1977 Clean Air Act Amendments no-risk philosophy; not seem take economic, social values into consideration. Bothered that if we consider social, economic values; threat that results will have be turned back because statutory mandate. Are tremendous uncertainties involved in plan. BAC will submit detailed document with specific language change proposals.

STAFF RESPONSE

Staff notes comments. No response necessary. Work Program Committee preliminary recommendations submitted in writing included in Volume III. MTC's adopted transportation recommendations will be included in final EMP.

Staff notes comments. No response necessary.

Staff notes comments. Final plan submitted by ABAG to State and Federal governments will be reviewed and approved by them, so is always subject to their interpretation of how plan satisfies Federal and State requirements.

Written comments recommending specific changes responded to in Volume III.

TESTIMONY

Angelo Siracusa, Bay Area Council, Executive Director - Continued

BAC recommends two-phased approach: first phase (for approval General Assembly) hopefully accept only measures get us reasonable further progress; second phase, identification other measures might be necessary between 1982 and 1987. Clean Air Act says can develop a 1982 plan.

Stationary source controls major concern. Inherent in BACT technology neither technologically nor economically feasible. Could require retrofitting minute new technology comes on line. BACT would exacerbate competitive disadvantage of Bay Area, make new, expanding Bay Area industry practically impossible. Costs could be so great certain existing industries forced close. Reasonably available control technology (RACT) will buy incremental improvement hydrocarbon reduction; will meet 1982 test. Propose adopt RACT for phase I, inspection-maintenance of vehicles. Goal reduction 216 tons hydrocarbon by 1982; these two measures will show approximately 283 tons.

Mobile source controls: recommended 1990 vehicle standards pushed Federal level. Land use, transportation controls: their Air Quality benefit minimal; possible political, economic, fiscal costs very high. BAC recommends not including phase I plan. Incumbent EMTF, ABAG ask Congress, EPA constantly reconsider standards; look philosophy of Clean Air Act.

Brian Cunningham, Councilmember from Gilroy

City Council opposed regional parking tax; over 1/2 Gilroy work force travels San Jose work; is no viable public transportation alternative. Over 95% of their air pollution caused by areas outside Gilroy; sole source pollution in Gilroy is agriculture. Request EMTF consider agricultural exemption. Farming generates some particulate matter; plan should address agricultural products importance economy California Gilroy's ground runoff drains into Monterey Bay not San Francisco Bay. South Santa Clara County should included in Monterey Bay plan or exempted from runoff provisions of this plan. Support policy 10 (septic tank controls). Ask positive endorsement San Felipe project, important for additional water use South S.C. County. Have no imported water source; obtain all from ground wells. Gilroy had significant problems with ARB over permission build new sewage treatment plant; Federal controls for receiving grants complicated; hardly worth it. City not feel land use, development strategies mandated by Sec. 208; recommend eliminate.

STAFF RESPONSE

Development Plan for Total Suspended Particulate Matter proposed for Continuing Planning Process. Impacts of proposed policies and actions will be identified during plan development.

Staff recognizes drainage patterns in southern portion of County tributary to Monterey Bay. ABAG coordinated with AMBAG by providing surface runoff data to AMBAG; also developing surface runoff management plan for that region. The main thrust of Draft EMP surface runoff management element is problem source control through application of best management practices. Best management practices apply to source of runoff problem regardless of ultimate receiving water location; drainage is immaterial.

The Draft EMP is more than a "208" plan, includes water quality, water supply, solid waste and air quality management recommendations. Land use management, development controls part of air quality management plan. Proposed for maintenance of Federal oxidant standard through year 2000. Can be implemented by local governments.

TESTIMONY

Theodosia H. Ferguson, speaking for an Ac Hoc Group for Bio-regional Plan Environmental Resource Center.

Any sound plan for Bay Area in 80s must include energy generation, use; land use; restoration of watersheds, soils, native species. Much work to be done consumer education; stress long-term environmental harmony energy needs, implications, development employment opportunities; direct rather than transfer economy (one based on local resources not imports). Land use: suggest sustained yield agriculture take precedence; differential taxation for farmland; high priority maintenance native habitats insure survival regional gene pool. Energy maximize local production known fossil fuel alternatives; conservation programs. Reforestation, reintroduction native species, watershed restoration, wastewater reclamation, soil maintenance, redesign city centers, emphasis locally produced goods--all components need to be addressed in depth.

Mayor Margarete Leipzig, Redwood City, representing San Mateo County of Mayors.

Council recommended in writing amendments suggested by City Managers Assn. San Mateo County. Most concerned about land use portion of plan. Recommend that portion be eliminated.

Michael R. Peevey, President, California Council for Environmental and Economic Balance (CEEB).

In attempting meet Federal requirements short time frame, ABAG staff has recommended some proposals neither socially acceptable, nor cost effective (land use controls). Believe final plan must fully consider: (1) Bay Area air quality has steadily improved; (2) must distinguish between Clean Air Act requirements for demonstration of "reasonable further progress"; identification other measures necessary between 1982-1987; identification of measures necessary to assure maintenance of standards after 1987; (3) acknowledge uncertainties inherent air quality planning; (4) view of uncertainty, incremental approach best; (5) mandated requirements may not be achievable in required time frame; (6) stationary source controls go further than required by requiring BACT on existing sources; (7) land use control measures unnecessary, unsubstantiated, unreasonable; and (8) new source review means severe growth constraints for Bay Area.

Goal of AQMP should be incremental approach implementation of measures; should be accomplished within Federal time frame extent feasible, based on good faith effort including implementation all reasonably available measures. Possible oxidant standard not be achieved by 1987. Rank control measures on emission reduction potential, cost effectiveness, implementability, social impacts, technological feasibility.

STAFF RESPONSE

Staff notes comments. No response necessary.

Staff notes comments. Written statement with recommendations responded to in Volume III (Summary of Public Comments and Responses).

Clean Air Act Amendments of 1977 will be addressed specifically by the Bay Area in the non-attainment plan. Air quality portion of EMP address specific requirements of 1970 Clean Air Act for AQMP; law requires both attainment and maintenance, not just reasonable further progress. Uncertainties are acknowledged in the plan. Specific recommendations are responded to in Volume III. Will be considered by EMTF, Executive Board and General Assembly.

TESTIMONY

Michael R. Peevey, President, California Council for Environmental and Economic Balance (CEEB) - Continued.

Significant variable for attainment, maintenance is new source review, supplemented by indirect source review for maintenance; both measures essentially limit or prohibit construction, expansion, industrial, commercial facilities. Draft plan is inconsistent in meeting strict Federal requirements. Some measures go beyond what required (BACT); others (industrial siting process) not met; questionable whether plan approvable by EPA. Further, plan not demonstrate is implementable.

Conclude plan should state oxidant standard cannot be attained by December 31, 1987, without implementation of "unreasonable" control measures, which is unacceptable. "Identification of all other measures necessary" to meet standard by 1987 could include BACT applied existing sources, gas rationing, prohibition small gasoline engines, other measures. Most cost effective, least environmentally, socially, economically damaging measures should be given priority for consideration subsequent to 1982.

Rai Okamoto, San Francisco Planning Department, on behalf of Mayor Moscone.

Dept. of City Planning will forward specific, formal response and comments. Need clarification of some principles. Concur with emphasis on flexibility approach contained in plan; assumption of good faith local government efforts to implement various actions in plan. Most of policies are compatible with San Francisco policies. Need clarification actions to reduce stationary source emissions. City undertaking vigorous effort enhance economic development activities. Need to clarify auto control zone in San Francisco are about undertake central business district planning study. In principle generally support actions. Support actions increase public transit use. Clarify proposals increased densities (land use). City in process public hearings proposed changes residentially zoned land, tends constrain number units developed; seeking implement mixed use development; endorse that policy.

Frank Farley and Forrest Bottomly, representing Western Oil and Gas Association.

Concerned about validity some recommendations. Conclude: BACT recommendation would seriously injure economic vitality Bay Area petroleum industry; (2) Plan too inaccurate use developing air emission control strategies; predicting air quality benefits; (3) A thorough revision plan required to protect economic future Bay Area; make it useful document for practical planning.

STAFF RESPONSE

Industrial siting not required in an AQMP, but point can be considered by EMTF, Executive Board and General Assembly.

Staff disagrees with this conclusion; merely because some measures are costly does not mean that they are "unreasonable."

Staff notes comments. No response necessary at this time.

Written statement, specific comments included; responded to in Volume III:

Staff notes these comments.

TESTIMONY

Frank Farley and Forrest Bottomly, representing Western Oil and Gas Association - Continued.

Problems modifying existing heavy industrial equipment to meet standards which could be easily achieved construction new equipment obvious. Propose splitting proposed action 3 (BACT) into two separate actions: one existing air emission sources; another new sources. Recommend reasonably available control technology (RACT) applied existing sources; lowest achievable emission rate (LAER) applied new sources.

Found overstatements present emissions, overstatements projected emissions, omission of growth-inhibiting effects, large uncertainties in plan; make recommendations unacceptable for practical planning. Question use present oxidant standard as fixed goal; revision by EPA now being considered. Goal should be kept flexible while issue being resolved.

Requests EMTF not endorse EMP; ask for revisions including RACT, LAER, correct omissions; uncertainties.

Proposed water plan calls actions could lead another layer government controls; not adequate justification interjecting ABAG as implementing agency into system already demonstrated effectiveness. None WQMP actions under 12 policies appears new; possible exception policy 1. Their adoption could result another layer approval requirements. Policy 12 (prevention, dealing with oil spills) fails recognize Coast Guard performed function highly effective manner.

Mayor Ilene Weinreb, City of Hayward and Coastal Commission.

Chapter 2 "Putting the Plan in Perspective" contains basic assumptions on which plan based; underlying fallacies assumptions. Page 2 indicates cheap gas caused development single-family homes edge older, more dense core area; gross oversimplification. Believe type housing resulted tremendous desire people have individual homes with land around home. Page 8 indicates putting jobs, homes closer together will reduce use automobile. At minimum should say program transportation controls coupled with management of development has intent put jobs, residences closer together; intent transportation development program reduce number miles traveled by autos. Page 17 indicates if actions implemented local governments, new development would average 5.9 units/acre (net); for Hayward not seem unreasonable; but requires more analysis. Not had opportunity analyze number units/acre expected develop under each of specific general plan designations; will need 1 - 1½ years do that analysis. Recommends adoption plan; not adopt compact growth scenario now; have it as option. If is significantly different from what general plan permits; then would suggest modifications because could not accept it.

STAFF RESPONSE

Uncertainties inherent any projection future conditions; discussed throughout Draft EMP. Continuing Planning Process (CPP), Plan updates provide flexibility respond new trends, data, standards. Draft EMP prepared meet current standards, objectives; if change, Plan revision via CPP.

Water Supply Management Plan proposes voluntary coordinating committee not new authorities, agencies.

Water Quality Management Plan recommends more specific policies, actions than previous plans. Draft EMP recognizes role and record Coast Guard; also recognizes number program responsibilities and staff.

Staff notes comments.

Inexpensive gasoline noted as one contributing, significant factor in suburban developments.

Staff feels intent of air quality plan reduce hydrocarbon levels through policies that will reduce contributions from automobiles by reducing vehicle miles traveled especially in commuting.

Major effort Continuing Planning Process analyze results compact growth alternative jurisdictional basis in concert with local governments.

TESTIMONY

Louisa M. Jaskulski, Political Action Coalition for the Environment (PACE).

Important look at broader scope of EMP, now just narrow self-serving interest. Need solutions affect more than one problem at time. Plan is huge; come out somewhat late for adequate review; people reacted negatively in panic, much based on misinformation, lack of information. Criticism should be based on plan; not people's fears. Basis plan base to move forward, more rational way than in past plan's coordination. Planning past been helter-skelter; people plan as problems arise; don't talk each other; lot of rediscovering same wheel. Continuation EMTF very healthy. Coordination oil spill problems very important. Having one agency do more serious monitoring bay pollutants very important; many pollutants appear be problems; are not sure yet. Someone must do this research. WMCC is essential. All existing agencies must start talking each other; to anticipate problems like drought; do preplanning. There are probably cheaper ways achieve ends needed than everyone doing own thing. Many agencies prone protect own turf, not serve public. Many valid questions been raised about compact growth scenario; underlying reasons for it very sound; perhaps this section should be pulled out now; subjected more detail review. Inner cities subsidize sprawl; generally new development in suburbs not pay full cost extending services out there. Make new development pay its full share of costs. Support solid waste section of plan; need regional attention developing markets, more emphasis recycling, finding ways make it work. Urge actually getting things going; not just talking about it. Surface runoff plan has been overlooked great deal; do not seem have adequate information know what next step should be; some suggestions basically common sense; easily implementable. One byproduct surface runoff pollution of inland water areas (Lake Merrit); plan should emphasize cleaning up inland waters will mean increased recreational benefits for all. Inadequate outreach into minority community. OCCUR meeting this week indicated tremendous level interest. Plan says costs will be borne disproportionately by low-income people; questions morality that. Need plan like this; continuing process so can monitor what goes on in future; so health problems related pollution decrease eliminated over time.

Bob Brown, Councilman from Portola Valley

Portola Valley not support amendments suggested by Mayor Leipzig on behalf Council of Mayors of San Mateo County. Realize plan not perfect; refinements will have be made. Town of Portola does in essence support plan as submitted.

STAFF RESPONSE

Staff notes comments. No response necessary.

Staff notes comments.

TESTIMONY

Bob Brown, Councilman from Portola Valley - Continued

Personally felt was serious omission in plan--adequate attention to impact population growth on problems considered. Illegal immigration now far exceeds legal immigration. Problems easier solve if growth could be slowed. Recommends population element be included, call upon Federal government implement national population policy; do environmental assessment impact of population growth on problems considered in plan.

Michael J. Dougherty, Union Oil Company

Concerned certain provisions draft EMP. Nearly impossible draft such short time frame. Public review period inadequate. Stationary sources: Action 2--new BAAPCD rule requires most organic liquids stored in floating roof tanks with secondary seals which conflicts with action 2 as stated. Union Oil currently initiating steps comply with new regulation. Floating roofs with secondary seals considered state of art control technology; provide better control than fixed roof tanks with vapor recovery systems. Action 2 now stands be deleted from EMP. Recommend incorporation concept reasonably available control technology (RACT) for existing sources; lowest achievable emission rate (LAER) for new sources. Actions will meet requirements CAA Amendments 1977. Action 3 addresses organic storage, gasoline bulk storage separately. No definition organic liquid given in EMP; usually gasoline considered organic liquid. Control strategy for gas; other organic liquid should be floating roof tanks with secondary seals. DEMP requires use closed balance system (with secondary system) for filling service station underground storage tanks; open balance system without secondary vapor processing system is very effective means control emission from service station gasoline delivery; CARB data indicate simple balance system achieve greater than 98% control emissions from bulk deliveries. Secondary system processing unit has energy penalty; increased maintenance costs. Recommend balance system without secondary system as EMP strategy for gasoline bulk delivery emission control. Draft EMP specifies secondary vacuum assist systems as control strategy for auto-fill operations; recommend vacuum assist systems requirement be replaced with requirement for state of art balance system.

STAFF RESPONSE

Staff resists recommending population policy for region. Plan must recognize uncertainty of actual future population but indicate actions necessary to accommodate range of possible levels population and meet standards and objectives without severe environmental, economic and social impacts.

Staff notes comments.

Public review opportunity provided over entire two year planning period; open EMTF meetings, county workshops, media presentations, letters, advisory committees, public meetings, public hearings.

Specific change recommendations addressed in Volume III.

TESTIMONYSupervisor James P. Kenny, Contra Costa County.

Submitted resolution from Board of Supervisors (5-0 vote). Resolution states more local review time; new processing schedule necessary for adequate local review of proposed EMP. ABAG requested take immediate action arrange general time extension for review of proposed plan by legislation if necessary. ABAG requested prepare new plan review schedule for consideration of plan elements in sequence that incorporates following actions: (1) water quality management plan considered first order meet closely practical established review schedule; ABAG requested obtain additional local review time from RWQCB, SWRCB and EPA; (2) AQMP considered second; time extension at least six months essential for local review; ABAG requested obtain additional review time from BAAPCD, CARB, EPA; (3) solid waste management, water supply management plans considered 3rd and 4th; ABAG initiate whatever action necessary obtain postponements.

Feinstein responded Marin County has similar concerns; Task Force will have over 75 amendments to consider in February. If need it, doesn't believe will be objection asking for more time; however, would like reserve that option see how far get with amendments before asking.

Jim Ryerson, representing California Air Resources Board.

Read letter from Mary Nichols, Vice Chairman of CARB, to Supervisor Dianne Feinstein.

Added to written statement his comments. Earlier speaker (Peevey, CEEB) implied this letter implied that ARB would implement land use measures in the region if not adopted by EMTF; not true; not in this letter; ARB does not have authority to do that. To achieve Federal ambient air quality standards, ARB within own authority is limited to overseeing BAAPCD on stationary and mobile source controls. Analysis contained in plan shows those technological controls not sufficient meet ambient air quality standards; land use measures, transportation measures are required; those actions can only be taken by local governments.

EMTF Member Reimer asked 3 questions: Letters state CAA amendments set out specific requirements, schedules for achieving Federal AQ standards; do anticipate that since CAA now specifies 1982-1987 goals, that what referred to is specific move toward 1982 to achieve the 5 year extension date to 1987 (based on concept of moving target); challenge coming up with right amount reduction per year between now and 1982. Ryerson: Letter referred to plan which currently shows barely attaining oxidant standard by application of all measures in plan in timely manner. 1977 Act says that by 1987 with the 5 year extension (which qualify for by giving incremental year by year reductions), Federal oxidant and CO standards must be attained. There's no provision for extending that 1987 date.

STAFF RESPONSE

PUBLIC HEARING
2/8/78--Page 8

Staff notes comments. Executive Board may modify time schedule.

No response necessary.

Staff notes comments. Air quality portion of EMP, while addressing certain requirements of the 1977 CAAA, is AQMP, not non-attainment plan. Designations for preparing of non-attainment plan not yet made by ARB.

TESTIMONY

Jim Ryerson, representing the California Air Resources Board -

Continued

Reimer: Letters seek implementation all reasonably available controls; does that definition apply reasonably available control technology?

Ryerson: In context of paragraph, sentence refers to actions viewed as reasonable that local government can take contribute to achieving standard (including transportation controls).

Reimer: What timely adoption does CARB seek from us respect other pollutants than oxidants? Ryerson: Specific requirements for non-attainment plan are for CO and total suspended particulates; also formulation of industrial siting plan in Act.

Feinstein asked what analysis was referred to in paragraph 1, page 2 "the analysis contained in the draft AQMP illustrates...".

Ryerson: Technical memos indicate costs associated with that; thrust entire letter, comparing costs implementing land use and transportation controls would be reasonable especially as compared to sanction.

Feinstein asked Ryerson for substantiation finding of reasonable.

Reimer asked for definition for timing adoption. Feinstein: Is letter saying if EMTF and Executive Board and General Assembly decide eliminate land use recommendations; put them in continuing planning process, that ARB will not accept plan? Ryerson: Not think letter goes that far. Suggested write letter with that question directly to Board. Feinstein asked such a letter be sent asking for clarification of that statement; asked if letter saying plan will not be accepted because does not deal with CO? Ryerson: Letter does not say that but law does; says non-attainment plan must show attainment all national ambient air quality standards; staff is aware of that requirement.

Leong (ABAG staff) said those elements would have to be completed later this year (not before April 6); either EMTF or successor agency would have to submit that to ARB so it can be included in January 1, 1979 submittal to EPA. The April 6 plan is not attainment plan for CO and particulates.

Supervisor Bort noted plan had actions by local, Federal and State government. Does this letter imply State will do; has accepted its portion of attainment; if they don't do their portion, will ARB then impose additional obligations on local government because of failure of State to do its part? (This includes legislation, money).

Ryerson: Letter says State will do everything within legal power; do not currently have legal authority to implement vehicle inspection-maintenance program; nor implementation heavy duty vehicle retrofit; no authority in dispersing funds for increased transit.

Jim Ryerson, representing the California Air Resources Board -

Continued

General Assembly delegate Nat Landes noted important note that if any changes made by ARB, agreement is plan will come back to local government for review before acted upon by State and forwarded to EPA.

Primo McHugh, City of Milpitas.

City submitted written statement comments. No objection to goals of plan; especially support goal #3 plan be implementable; that social, economic and environmental effects not so unacceptable cannot be implemented. Do not feel can be carried out as now worded. No serious objections to SW, WQ, Water Supply elements. Concerned with portions of AQMP feel have serious adverse economic effects; are inefficient methods; result minor improvements; as such clearly unnecessary. Land use controls definitely least cost effective; overkill. Suggest: economic tradeoff concept as additional consideration. New source review adversely impacts growth in certain parts of Bay Area. Feel economic tradeoffs not been addressed. By economic tradeoffs mean concept of compensation for loss of industry wishes to locate in area and is refused permit on basis of local ambient air quality, consequently is placed in area upwind from us. This compensation might be accomplished by tax revenue sharing concept.

Les Ayers, Warm Springs Dam Task Force.

Represents Sonoma County organization opposed to Federal dam project. Consider entire plan outstanding piece work; nothing is perfect. In Sonoma County, have technical problem that should be addressed. Sonoma County not an ABAG member. Those of us interested in environment in Sonoma County wish ABAG would start applying huge amount pressure get us back into ABAG. Page IV-24 of plan show Warm Spring Dam will provide Bay Area water for about \$32.59/acre foot. Sonoma Water Agency does not sell water for that price; currently selling him water at \$100/acre foot. This project under serious heavy litigation; attack from several sources; even if started tomorrow would not have water for population Sonoma County or Marin for over 10 years. Figures for this project should be raised by factor of 6.

Ron Aroissone, Councilman from City of Hercules.

Land use control measures applied Hercules since July 1976 when ABAG Executive Board voted limit growth of Hercules to 15,000. Hercules feels: 1) insufficient time afforded for analysis, review affected communities, agencies; recommend seeking additional review time through legislative action; 2) mandated, non-mandated plans should be identified, handled separately; consideration given evaluating mandated plans first; 3) references land use controls should be deleted from EMP; contrary to law and custom. They would cause severe economic damage.

Staff notes these comments. Specific recommendations responded to in Volume III.

Staff notes comments. Prices for water to supplied by all proposed water projects were supplied by water agencies and/or updated (using cost indices) from their plans.

Staff notes comments. No response necessary.

TESTIMONYPUBLIC HEARING
2/8/78--Page 13

Angelo Frosolone, Councilmember from Mountain View, Planning Policy Committee.

Mountain View's recommendations forwarded to Santa Clara County Council not unanimous. Essentially if choice between no plan; some plan, majority leans toward latter. Speaking for himself (minority report of one), asked why hurrying plan along? What would happen if majority Bay Area cities, counties filed plan. Suggest full blown legislative hearing on important controversial plan. State; Federal government will only impose plan on us if voters allow it. Not want; need central planning such as proposed in EMP: first loss local control; second resultant chaos possibly within 10 years. Two examples chaos, central planning Dade County, Florida; New York City.

Bonie England, Coalition of Labor and Business (COLAB)

Submitted written statement relating land use portion. Request land use portions deleted; are far too disruptive economically, socially for minimal potential benefits.

Doyle Williams, Steamfitters #342 (Concord, Alameda County), and also Alameda/Contra Costa Building Trades Council.

Dow plant would have provided full employment for membership possibly for 10 years; probably same other building trades. Membership 600 out of 1,130 members chronically unemployed; leaving area. Any air quality standard ultimately no-growth; also population control standard. Other states don't seem have same types controls; dictates from EPA as Bay Area. Difficult explain to members why large projects in region been turned down. Might be narrow-minded to want employment; easy for person with job not affected by standards believe should clean up air by any measure possible; if that person's job in jeopardy would also take second look.

Mayor Verne Roberts, City of Antioch

Mayor Roberts did not present oral statement; distributed copies of City's statement. City statement asked deletion land use controls in AQMP until impacts; costs further examined to justify inclusion. Request EMTF have ABAG staff distinguish between those policies required by EPA as minimum standard; those exceed standard; those policies presently in effect; those which would be new. EMTF should provide more detailed report, on management; fiscal feasibility of plan. Recognizing complexity; significance of EMP, City cannot take any other action unless additional information requested is supplied; and ample time given for review.

STAFF RESPONSE

Staff notes comments. No response necessary.

Staff notes comments here. No response necessary. Written statement comments, proposed changes addressed in Volume III. Recommendations will be considered by EMTF, Executive Board and General Assembly.

Staff notes comments.

Federal air quality standards apply throughout country, also California air quality standards apply throughout State; difference--not all areas are non-attainment areas; different degrees violation; different standards violated reflected controls required.

Staff notes comments here.

Written Statement responded to in Volume III. (Summary of Public Comments and Responses).

TESTIMONY

Ron Butler, Operating Engineers #3

About 36,000 members, 15,000 live Bay Area. Serious reservations about plan, e.g. lack time study. Cannot see how anyone can digest all material; arrive at intelligent decision by April 6; long continuance in order. Strongly urge deletion of indirect source; land use controls; consider alternative of no plan at all; take long hard look at that alternative.

Robert L. Sturdivant, representing Supervisor Dan McCorquodale, speaking for Santa Clara County Board of Supervisors.

Briefly reviewed highlights of report adopted 1/30/78 by Board of Supervisors. Full report presented to EMTF.

Board supports overall objectives Draft EMP; most policies. Most policies very similar previously adopted Board policies; or those currently being considered by county; its 15 cities. Board strongly supports continued local control of land use decisions; power implement these policies should remain with those jurisdictions which currently exercise land use controls.

WQMP: Board supports most of policies; questions role of ABAG and RWQCB in two parts - Bay Delta Research Program and Regionwide Water Quality Data Management System; questions why ABAG coordinator rather than RWQCB. Policy 6 encourages consolidation treatment facilities; discharge wastewater well mixed receiving waters; this may in effect support construction of "Supersewer"; studies now in progress should be completed before judgment made on project. Policy 8, plan should recognize role county-prepared surface runoff plans; specific control measures employed each county should be determined primarily by county Surface Runoff Plan. Action 11.4 installation sewer lines where on-site systems inappropriate; potentially inconsistent with Air Quality Plan recommendations (compact development); possibility extending sewers outside urban service area could promote sprawl. Should be contingency plans for water treatment plants in event mechanical failure; strikes. Word "contaminant" should be substituted for "pollutant" until contaminant proved pollutant; specific environmental harm.

WSMP: Board supports generally supports plan with few modifications. No actions relate to studying quality water for domestic consumption; should be added. Interties between various water agencies systems should not be presumed before necessity; cost effectiveness determined. Public health issues regard wastewater reclamation should be addressed.

STAFF RESPONSE

Staff notes comments. ABAG contractually obligated submit Plan to State/Federal agencies.

Staff notes comments summarized here.

Written comments; recommended changes addressed in Volume III.

TESTIMONY

Robert L. Sturdivant representing Supervisor Dan McCorquodale,
speaking for Santa Clara County Board of Supervisors - Continued

AQMP: Board supports all four sections with some modification. Santa Clara County now has worse overall air pollution problems in region, much generated outside county; Board believes effective regional solutions extremely important. Board supports most policies development; land use management section with provision that section revised; stated more clearly. Suggested rewording submitted, patterned on current practices Santa Clara County. Board opposes adoption parking tax plan (Action 9); only apply downtown San Jose; put area at competitive disadvantage. Local government should determine density development under compact scenario; where increases feasible; specific density should continue be determined by local government.

Continuing planning process: Recognize inadequate time for plan review; future updates should allow sufficient time local review, citizen input (at least 3 months from release consideration by ABAG' representatives). Include establishing priorities. Plan implementation should be done in stages. Develop annual work programs for implementation; identify actions must be taken immediately; those may be deferred later date; define two or more stages for plan implementation.

Recommendation 15 appears not official part plan; in text, appears indirect way including parts not meant be there.

Individual/Comment:

Richard C. Wilson, Rossmoor Residents Association.

Commented only air quality; water quality due to limited time study. Water Quality: Policy 1 - agree with Contra Costa County staff recommendations delete actions 1.1 - 1.6; replace with support for state program now in preparation. Delete action 1.7; redundant, SWRCB; RWQCB could manage data monitoring program. Policy 2 - ABAG should be required list items continuing planning required by Federal law; found needed result this planning process. Delete actions 2.1, 2.4. Agree with action 2.2; with County recommendation on 2.3. Policy 4 - recommend deleting action 4.3, 4.4, 4.5; seems be no statement need; cost \$100,000 annually. Policy 5 - agree County; no plan can be approved without adequate time analyze potential impacts 20 yr. project list on county, cities; wastewater treatment districts. Policy 8 - agree County recommendation reword "Each county lead agency should establish a program of surface runoff control measures according to each county plan". Policy 9 - no recommendation pending review by industries. Policy 12 - delete policy as stated; replace with encourage each county develop procedures as needed to supplement industry efforts; State, Federal, Regional water quality agencies.

Air Quality: Policy 1 - agree generally as proposed. Policy 2 - agree as proposed. Policy 3 - disagree action 8 until more known about timing increase bridge tolls; how increase revenue would be spent. Actions 9 and 10 - disagree, consider unfair burden on low- and medium-income people. Action 11 - heartily agree. Action 12 - disagree, because cost; and minimal effect on air quality. Policy 4 - delete.

Dick Turner, Turner and Sullivan for California Refuse Removal Council, Northern District.

Concur with virtually all policy statement Solid Waste Management Plan. Most of plan been said before, for last ten years. Concerned with insertion ABAG into process; stand solidly favor local control. Been dealing local govt. for years; now starting deal with State. Are pioneers terms govt. regulations; State just started regulate garbage industry. Coordinating role; what State said few years ago; now playing decision-making role. Create another level of govt. inserted between local govt. and State. Also have Federal Govt. (RCRA) which may now regulate landfills much greater extent. Will provide written statement. Concerned action 6.2; 7.1 (SWMP) - indicates undue reliance permit coordination procedures provided through AB 884; OPR permit handbook. New supposedly efficient procedures have made things worse, not better. AB 884 terms permit coordination; not appear be answer.

Nadine Hack, representing Paul Cobb, OCCUR - representing the Community Conference which was co-sponsored by OCCUR and Bay Area Urban League and 25 other citizen-based community groups. Held Feb. 2, 1978, in Oakland. Representation represented 382,000 members. Conference focused on impact of EMP on minorities, handicapped and aged. Over 400 community members attended. There were workshops conducted in the afternoon for community

ABAG Staff Response:

PUBLIC HEARING
2/8/78--Page 16

Staff notes comments here.

Written comments responded to in Volume III.

Staff notes comments.

SB 424, Chapter 689 of the California Statutes 1977 requires a regional solid waste management plan based on county plans, problems identified needing regional solutions coordination. Legislation merely recognizes actions ABAG already authorized to do, been doing several years; does not create any new waste management involvement at regional level.

Specific comments; recommended changes responded to in Volume III.

Individual/Comment:

Nadine Hack (Cont'd)

participation and notes from workshops are now being compiled into summary report which will be submitted to ABAG. The general feeling was very happy to have option of this conference and to have plan brought to their attention, for their review. Felt EMP would have direct and significant bearing on their situation, and desired to be more aware of exactly what it would involve and what impact upon themselves would be. Felt there had been inadequate preparation. Each workshop received a 42-page recommendation sheet and each workshop had an hour to review 42 recommendations and comment on. Everyone expressed sincere desire to study plan further, and felt there should be an extension of decision date with ABAG planning an ongoing community education program. Should be an ongoing series of discussions, each addressing limited topical issue. People should be better acquainted with issues to evaluate them and respond. Would encourage further participation of this type.

Wayne Williams, Citizens for a Better Environment.

Support document almost entirely. Submitted four amendments: (1) ABAG should endorse speedy implementation strict pretreatment standards for industrial contributors to municipal wastewater systems to prevent discharge toxic substances into Bay; (2) should propose establishment permit program monitor; regulate generation; disposal hazardous solid wastes by Bay Area industries; (3) ABAG should discourage proliferation highly polluting industries; industrial consumption high sulfur fuels part strategy to achieve all Federal air pollution standards; (4) ABAG should encourage development; utilization non-polluting energy resources in Bay region. In plan, ABAG assumes proliferation high sulfur fuels; no reason (economic basis) need introduce high nitrogen, high sulfur containing agricultural export commodities; readily available within 50 miles Bay Area in Central Valley. If use western coal; Alaskan oil will jeopardize ability Central Valley produce food commodities needed. Agriculture by far State's most important business. One way achieve AQ standards is use BACT; reasonably available Control Technologies (RACT) simply stands for smog, excess profit, proliferation of silk ties. Set best available standard; don't listen to excess profit pleas.

Logan Eisele, Bay Area Soft Drink Bottlers Association.

No oral testimony; submitted written statement.

Henry Simonsen, spoke senior citizen, Rio Vista.

Decided to present testimony to larger audience at a later meeting.

ABAG Staff Response:

Staff notes comments.

Water Quality Management Plan contains policy pretreatment industrial wastes prior discharge - a Federal/State requirement.

Solid Waste Management Plan policy recommends further analysis hazardous waste disposal and alternative management options. Hazardous waste landfill sites require permits.

Air Quality Maintenance Plan addresses controls necessary meet; maintain Federal photochemical oxidant standards includes BACT stationary sources; Continuing Air Quality Planning Process would develop plans to meet; maintain other Federal and State air quality standards including nitrogen dioxide, sulfur dioxide.

Written statement; proposed changes responded to in Volume III.

No response necessary.

Individual/Comment:

Jacqueline C. Harm, North Berkeley Neighborhood Council, Berkeley.

Represents inner city neighborhood association. Active in process down-zoning. Approve land use planning; however, object putting burden compact growth on inner cities because social disturbances created. Feel whole process public participation very important; cannot occur without sufficient time for review; intense involvement; communication with existing community groups; not only with special interest groups with financing backing; already established leverage. Recommend policy statement; recommended action encouraging more comprehensive public participation; education. Recommend specific plan gaining input from sectors community not been part political power structure; would require intense community education. Crucial aspect waste management planning should involve plans for waste reduction. Urge inclusion policy statement; actions intensive public education process toward elimination waste. Plan's recommendations reducing waste directed toward individual citizen response; means significant change individuals practices; requires substantial effort via EMP toward public education. Recommend environmental education advice provided to public schools, youth organizations, community clubs; social service organizations.

Mrs. Margaret Tracy, Preserve Area Ridgelands Committee.

Committee seeks preservation 1,300 sq. miles ridgelands through Contra Costa, Alameda, Santa Clara Counties for continued agricultural use, parks and trails. Position that EMP policy document now being considered will determine future quality of life in Bay Area. Strongly endorse AQMP Policy IV; subpolicies A thru P; actions 1 thru 49. These policies could help keep ridgelands free from development; restore health; well being of urban centers. Believe land use controls way clean up air; water; lowest cost to general public. Land use controls preferable alternative to continuing, increasing public expenditures accompany continued urban sprawl; produced tax burden under which public is groaning.

Al Luhks, speaking as individual, Clayton.

More plan my life; more restrict my mobility; greater increase my tax burden; more rebellious I become. Question how many more going be like me after proceed with this plan. Can have first plan in nation, best plan in nation; but can't have both.

David Aaron, speaking as individual.

Need standards limiting nuclear contamination air, sea, land. Finds shocking that nuclear safeguards not part this agenda; is concern among local govt. officials at secrecy surrounding nuclear hazards. Should we depend on Livermore Lab for protection? This issue should be brought to public post haste.

ABAG Staff Response:

Staff notes comments.

Agrees importance public participation; intensive effort throughout EMP plan development process; continuation proposed for Continuing Planning Process. Many recommendations in Draft EMP public information; education; coordination; conjunction other education programs at all levels.

Staff notes comments. No response required.

Staff notes comments. No response required.

Staff notes comments.

The California Energy Resource Conservation & Development Commission has jurisdiction over State nuclear energy policies.

Individual/Comment:

Alexander Zuckermann, East Bay Bicycle Coalition.

Summarize written statement. Believe bicycles terrific resource; save wear, tear on environment. Seen no program in country seriously addresses incorporating bicycle into transportation picture. Propose actions, components for consideration. EMP proposals not comprehensive enough; are serious omissions. Bicycle storage facilities terribly important; a system bicycle paths should be done comprehensively; propose comprehensive regional bicycle transportation plan for Bay Area; developed by MTC as component of Regional Transportation Plan. Should include: comprehensive system bike routes for commuting, shopping, errands, recreation, comprehensive plan bicycle parking facilities; bicycle interface with transit; bicycle access across physical barriers; comprehensive plan public education acknowledging bicycle as legitimate mode. Cyclist in public roadway feels there through sufferance of automobile; if nothing else comes about but recognition that bicycle has equal rights; obligation road; bicyclists will be pleased. Our recommendations will reduce hydrocarbon emissions by 6 tons/day if compared to San Diego experiment.

Darryl Skrabak, San Francisco Bicycle Coalition.

Plan's recommendation bicycle parking; storage excellent; lack is major impediment increased bike use. Good bicycle parking; storage deceptively difficult provide. Suggest bicyclist hired do bicycle work.

Plan also recommends series bike lanes on half-mile grid; would do little more than increase sale white paint. Bike lanes controversial among bicyclists; for most part not worked well where tried. Suggest recommendation be dropped. Recommend traffic engineering departments throughout Bay Area perform jobs as if bicycles mattered; most time they do not do that. Tremendous service design streets; maintain them as if would be used by bicycles. Plan fails mention bicycle-mass transit interface; glaring omission. Combine bicycle use with mass transit; can make mass transit work for you. Approves auto-free zone San Francisco; don't exclude bikes from that district.

Leland W. Hooker, San Leandro, speaking as individual.

Urged basic principles kept mind: don't lose sight fact PL 92-500 Section 208 just nose of camel appearing under edge of tent of local govt. Congress not yet provided Federal land use controls; this is effort get toe in back door. Keep in mind must be realistic; rational; urbanization, environmental quality as have known it in past, would like it in future are mutually exclusive. Efforts provide environmental quality in urban situation to degree would like could easily become counter-productive in effect on quality urban life. Stop applying multiple bandaids to sores which are symptom of disease which is overpopulation.

ABAG Staff Response:

Staff notes comments here.

Written comments; recommended changes addressed in Volume III. Joint comments from East Bay and San Francisco Bicycle Coalition.

See response to Alex Zuckerman.

Staff notes comments. No response required.

Individual/Comment:

Councilman Dick Griffith, City of San Bruno.

Written statement submitted with request that it be appended to record of public hearing.

"The delegate from the City of San Bruno questions the process by which Mayor Marguerite Leipzig of Redwood City arrived at the conclusion, presented at the hearing, that the cities of San Mateo County support deletion of the land use portion of the Plan. The delegate from San Bruno had no such direction from his council and considers that Mayor Leipzig erred."

Provided newspaper account shedding light on process; requested its inclusion, if appropriate, with San Mateo portion of the testimony.

President Rod Diridon adjourned the hearing with these closing comments:

"All of the items, the testimony received, will be analyzed and transmitted to all of the local elected officials on the Executive Committee and General Assembly of ABAG. We will have a chance to mull it over and it will become part of the permanent record, and potentially part of the plan if it is adopted."

"Way Santa Clara County developed their position was not by merely approving the plan; in fact we did not--we recommended very significant and substantial changes to it. But we got into it--we spent a lot of time on it, we spent a lot of staff time on it and we really began to analyze it. The more we analyzed it, we recognized it is not that bad a plan; with some modifications it can become a real, living, useful document. Hope that is what people will read when they read last part of this testimony. We really need to protect flexibility of the plan, we need to get into it individually as local elected officials, and make that plan work for us."

Meeting adjourned. 7:10 p.m.

ABAG Staff Response:

Staff notes comments. No response required.

PUBLIC HEARING - 2/16/78
(San Francisco)

Public Testimony on Draft EMP and Draft EIR

TESTIMONY

Councilman Harvey Yorke, City of Novato

Read council resolution passed 2/15/78, asking that ABAG allow more time for review of plan and expressing deep displeasure as a member of ABAG over the failure of ABAG to complete the draft EMP in time for adequate action by the city. Suggested that CCEEB document suggesting how staff time be used in future had some good ideas, the cities and counties might have some good suggestions. Hoped general public had chance to express opinions fully based on the plan and not just lectures.

Mark J. Palmer, Endangered Species Committee of California.

Feels plan wise step in protecting environment; protecting own personal health. Strongly disagreed environmental management programs cause adverse effects on economy; job opportunities in clean up environment. Public health and well being will be enhanced by regional environmental protection. Specifically addressed WQ. Already seeing improved water quality; increasingly wildlife species responding to improvements. In recommended study of oil/chemical spills, strongly recommended emphasis on prevention, enforceable penalties assigned to offenders; goals need to be clearer. Supports WQ recommendations. Natural flushing of Bay should be protected. Delta outflows must be maintained at adequate levels.

Violet Gotelli, A.W.A.R.E.

Not enough time to review plan. Utopian, no cost

STAFF RESPONSE

Staff notes resolution. Draft EMP prepared during open planning process; extensive public participation during the process. County roundtables, workshops, numerous technical advisory committees, wide media coverage; attempt to reach citizens and public officials. Progress Report in September covered most of major recommendations in draft plan released in December. Deadline for action by ABAG extended by Executive Board action earlier on 2/16/78 until June. to provide local governments with more time review, comment and amend plan.

Staff notes comments. WQMP policy 12, Action 12.2 (as amended by EMTF) emphasizes spill prevention.

Supervisor Bort : Federal government has passed a

TESTIMONY

Violet Gotelli (continued)

evaluation; no mention where money will come from to finance measures. Concerned congressional hearings held by Leo Ryan no impact. If good plan nothing but gain from public hearings. Fear in San Mateo County because of misunderstanding. Clarify plan, funding, costs (human rights not just money). Plan tells people where to live, work; it displaces companies and industries. Asked congressional hearings be held before adoption of plan.

James Corn, California Refuse Removal Council, Northern District, Sacramento

Industry position is current solid waste plans adequately performed by local governments with assistance, regulation coordination of State SWMB. No justification infusion into process regional level to coordination, help implement SW operational policies. Objections could be eliminated if SSWMB substituted for ABAG. Premature to follow lead of AB 884 for permit process.

Billie Bowles, California Coordinating Council

Speaking for umbrella group representing 38 California coalitions of labor and business. EMP example of many ways we go wrong. Focus seems to be there is not enough time to solve problems the right way, with free enterprise, innovation, ingenuity, the American way. Plan proposes socialist oriented controls over every aspect of our lives. Planners often admit they don't know if controls accomplish what projected. A large portion of the plan and the DEIR was not printed and distributed until almost a month after hearings began. You have now extended deadline, not talk of additional formal hearings, Public is not able to offer amendments. Why aren't all deadlines

STAFF RESPONSE

law; do not know implications of that law; hopefully our plan will demonstrate implications of law. If difficult as some think, need amendment and change at the Federal level.

Councilman Grote: We have a contract to do a job. In process of doing that. Much of this is new, Whole thing is not over in June. If we approve plan, then we want a congressional committee to look at procedure.

Specific recommendations responded to in Volume III (Summary of Public Comments and Responses). **SB 424** requires preparation and updating of regional SW plan by ABAG; not SSWMB.

Supervisor Lyon: Corrected some mistatements. Amendments can be made until March 31. Representation on EMTF and Executive Board so diverse there will be no difficulty finding someone willing to submit any amendment. EMP does tell costs of plan, identifies implementing agencies. Not a no-growth plan, Once AQMP is adopted, permitting process will not be so complex because what can or cannot be done will be known.

Staff: Draft EMP released late December. DEIR distributed then to at least one library in each county. Notice of its availability published each county first week in

TESTIMONY

Billie Bowles (continued)

being extended. How can such a long permit process for business and industry be used, only 3 months these public hearings; only five weeks public input when we did not have a completed plan for one month of that five weeks. When agency approves its own EIR (in my opinion a very insufficient one) we may have lost our system of checks and balances. No one wants to be managed, controlled under guise of cleaning up environment. Asked General Assembly delegates to vote no on plan.

Kathryn Russell, Sierra Club Bay Chapter

EMP is crucial step assuring quality of life in Bay Area. Will require tough implementation decisions, gains are public health, long-term economic stability, enhancement of unique environmental quality. Supports WQM section with additions: recommend tougher penalties for oil and chemical spills; eliminate small boat pollution; seek optimum fresh water delta outflow. SWM section needs quantified goal reduced waste to landfills; Support transportation proposals; strongly supports land use compact growth actions.

John Holtzclaw, San Francisco, speaking as individual

Endorses EMP. Land use controls will help save energy, which will help create jobs and reduce unemployment. Poor balance of payments largely due to energy imports of petroleum/gas. Land use controls save energy by encouraging more dense development, reducing travel distances. Should strengthen land use and transportation sections. LA Times studied cost controlling particulates and sulfates. Found nationwide net savings of \$7 billion, two dollars for every dollar spent. Clean air is good business.

STAFF RESPONSE

January. Three formal hearings on plan held, plus numerous public meetings and workshops. Also opportunity for public comments at EMTF and Executive Board meetings. Staff cannot respond to general statements of insufficiency of DEIR. CEQA requires body taking action on proposal for which an EIR is written to certify FEIR prior to taking final action. If General Assembly fails to adopt a plan, State required to prepare one. No action by local governments means State will act.

Specific recommendations to be considered by EMTF.

Staff notes comments. No response needed.

TESTIMONY

Thomas Graves, Security Pacific Bank

Submitted written statement. Areas needed more study, Plan assumes full employment economy (or rate of unemployment remains neighborhood of 4% during forecast period). Bay Area economy cannot consistently operate at this level. Fewer jobs mean annual income loss of \$451 million. Economic forecasts have uncertainty; don't accept as fact study conclusions. ABAG recognizes limitations of study. Serious implications from these limitations.

Steve Weinstein, San Francisco, speaking as individual

General plan is nothing more than economic police state. Economic regulation and taxation responsible for unemployment and inflation. AQMP ready six months before EPA requires it. Under CAA administrator can give delay of 18 months for secondary standards. Demands of Congress not unalterable; no reason cannot be amended; Cost-benefit lacking in plan. No quantification. How much air pollution abatement cost? No analysis. Plan says few/or petrochemical complexes in Bay Area, no auto assembly plants. How will it affect G.M. plant in Fremont? Plan admits effects on minorities low income people will be grave. Plan proposes direct opposite to zoning changes now proposed for San Francisco.

STAFF RESPONSE

Effects noted in NSR report expected only under circumstances spell out in report, namely if NSR is applied here and nowhere else. Since NSR is performed elsewhere, and since EPA has indicated uniform enforcement of oxidant standard, effects should be less than indicated in NRS report.

Councilman Grote: Annual reevaluation of plan will occur. Attempt here to build the possibility for economic expansion.

AQMP must be submitted by ABAG in June 1978 to meet contract obligations. January 1979 date mentioned by speaker is for SIP, and non-attainment plan under 1977 CAAA. AQMP is not non-attainment plan. Photochemical oxidant standard is not a secondary standard; it is a primary one. Cost estimates for plan recommendation are shown in plan. Numerous technical memoranda cited in plan do analyze Bay Area's environmental problems. Plan is not intended to provoke competitive disadvantage for Bay Area industries. Mitigation measures are proposed for low and moderate income households. San Francisco's densities, even under down zoning, would be consistent with compact growth recommendations. Continuing planning process allows for flexibility if Congress changes Clean Air Act.

TESTIMONY

Judy Kunofsky, Berkeley, speaking as individual

Support goals of land use component of AQMP. Cannot rely on technology alone to achieve and maintain clean air. Cannot ignore distribution of people and jobs, major determinant of transit use. Modeling process finds at current zoning, Bay Area runs out of vacant residential land about 1990 under both low and high projections. This means pressure for infilling and rebuilding have undoubtedly begun. Proposals in plan encourage redevelopment and development at somewhat higher densities in already built up cities, transit corridors, development at fringe of current housing. More compact development accommodates growth in housing and population better than current trends. Appalled as negativism of those who claim to be pro-growth. ABAG proposals accommodate substantial growth in housing and population, and do so better than current trends. In addition they protect public health.

Jack Oppenheimer, San Francisco Lung Association

Submitted position paper. Controls are not proposed for carbon monoxide, and particulates. We should have such strategy. Also concerned about SO₂; sooner or later region will not attain standard. National health standards are to protect public health. Central issue in plan is the kind of rational industrial development which takes account of conservation of air, water and land upon which we all depend.

Richard Cole, Association of Environmental Professionals

Submitted written comments, technical concerns about format of plan. WQMP should indicate if proposed controls would be effective in meeting RWQCB objectives. Costs of surface runoff controls understated. SWMP

STAFF RESPONSE

Staff note comments. No response needed.

These control plans will be developed in continuing planning process.

Staff notes comments. No specific response needed.

TESTIMONY

Richard Cole (continued)

rest on technically sound basis. WS plan needs systems approach. Goal of 6.5% reduction may be too low. No new additional water supply facilities may be required. Association committed to responsible environmental management planning and management endorses efforts to address problems in region.

E. D. Yates, Canners League of California

Submitted written statement. Supports continuing planning process. Generally endorses BALIA recommendations. Some assumptions questionable; e.g. food processing industry will decline. Planning predicated on that assumption may be in error. Plan fails to adequately address energy impacts, tradeoffs and sources. Support phased implementation of air quality plan. Vitally concerned about AQMP Action 1 re paints and coatings; could severly impact canning industry. Urge cost-benefit consideration applied to AQMP Action 2. Concerned action 5.1 of WQMP; urge more thorough appraisal. Plan does not show costs pre-treatment and point discharges. Urge caution on water supply plan, markets for wastewater reclamation/reuse uncertain.

Wayne Hoffman, Natural Resources Defense Council

NRDC submitted written comments. Strongly supports position of ARB, strongly supports what is in plan, concerned about what is not in the plan. Need program to cover other pollutants, must be included. AQMP assumed NSR adopted in Bay Area but nowhere else; impacts project jobs not created, not existing jobs lost. Look closely at inspection/maintenance, could be more effective if move up a few years.

STAFF RESPONSE

.

Regional industrial growth/decline projections based on nationwide trends and projections by sector, regional share of sector activity. Potential impacts, including energy, identified on blue tables. Analysis of the effects of implementation of the action will be a regular part of the continuing planning process. EMTF deleted Actions 1 and 2 of the Draft AQMP on February 22. Pretreatment and direct discharge industrial cost estimates are noted in blue tables based on national study for EPA related Bay Area industries. Wastewater reclamation proposal recommends only further study. We agree that markets are uncertain now.

Such plans will be developed during the continuing planning process.

Inspection/maintenance programs will require legislation.

TESTIMONY

Robert Desky, Concerned Citizens Coalition of San Mateo County

Coalition's goal is to achieve balance between environmental and economic considerations. Believe Congress had balance in mind when passed laws requiring this plan. Concerned about methods by which we achieve goals in the plan, too much being asked too fast. Is RACT sufficient? Is 4-7% reduction in pollution from land use controls worth sacrifice asked? Can we afford to implement the plan? Oppose most AQMP proposals. Oppose regional land use controls. Transportation and land use controls seriously affect lives of millions of residents. Welcomes congressional hearings on plan.

Sue Smith, San Francisco, speaking as individual

Strongly supports plan. Already late in meeting air quality problems. Urged careful consideration of indirect source review. Congress said purpose of CAAA is to protect, enhance quality of nation's air resources, promote public health, welfare and the productive capacity of its population.

Larry Orman, People for Open Space

Supports plan, particularly land use controls, especially because they further implement regional plan policies adopted by ABAG member governments.

Alden Bryant, Chairman, Energy Task Force, California Democratic Council

Asked staff to prepare brief supplemental document showing impacts on resources and energy. Use of solar heating may cut down on oil burnt in region. Oil burning power plants should be replaced. Should be provided as backup for plan.

STAFF RESPONSE

Staff notes comments. Draft plan proposed to meet standards. If land use controls are removed, they must be replaced with other maintenance measures to demonstrate maintenance of the oxidant standard. EMTF action on stationary source controls allows for economic considerations in defining specific control technologies for specific industries.

No response necessary.

No response necessary.

Energy impacts are noted in blue tables. Energy considerations should be considered as part of the continuing planning process.

TESTIMONY

Frank O'Kane, realtor, Millbrae, speaking as individual

Grieved to see people trying to control land, control the land and you control people. Surprised that public does not have a vote on plan. People do not want to be regulated. We would rather die from dirty water and dirty air than be regulated--that is not American way to be free.

Richard Cowart, Environmental Defense Fund

Commended ABAG on water supply plan. Do not have to build excess capacity to meet future water needs. If used sensibly, presently available water resources sufficient to meet Bay Area water needs through 2000. Believes construction of new water projects, diversion of additional water from Bay, delta is unnecessary in most cases. EDF proposes implementation of modest conservation program to attain average 13% reduction in water demand in all sectors. Strongly supports implementation of wastewater reclamation program meet approximately 6% total demand by year 2000.

Ernest H. Hills, San Mateo, speaking as individual

Feels imperative actions established here in Bay Area be required in other non-attainment areas to we can remain competitive. If ABAG acts in non-democratic, dictatorial way, important in region will decrease, and does not want to see that. Asked that public be allowed to vote on plan.

San Francisco Tomorrow submitted written statement.

STAFF RESPONSE

Congress, elected directly, passed the clean air and water legislation precisely because they believed the public does not want to die of dirty water and air.

No response needed.

The intent of this comment is included in the EMP. General Assembly delegates are representative of region's local cities and counties. Direct election on this plan is not feasible given congressional time schedules.

See responses in Volume III.

TESTIMONY

David Tam, Association of Bay Area Recycling Groups and Environmentalists

Submitted written statement.

Solid waste advocates delighted solid waste plan has been criticized less than other plan elements. Hopes Executive Board will speedily adopt excellent recommendations in plan. Bay Area could create a very significant recycling industry, and could create period 1,500-5,000 new jobs.

Hearing adjourned at 11:45 p.m.

STAFF RESPONSE

See responses to suggested amendments in Volume III (Summary of Public Comments and Responses).

APPENDIX E

WRITTEN COMMENTS AND RESPONSES ON THE DRAFT EIR

Union Oil Company of California

Union Oil Center, Box 7600, Los Angeles, California 90051

RC78-038

union
76

February 28, 1978

RECEIVED
MAR 3 - 1978
ABAG
CLEARING HOUSE

Association of Bay Area Governments
Hotel Claremont
Berkeley, California 94705

DEIR - Draft EMP for San Francisco Bay Region

Union Oil Company of California appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Draft Environmental Management Plan (EMP) for the San Francisco Bay Region. We will confine our comments to the Air Quality Maintenance Plan (AQMP) portion of the EMP.

Union believes the DEIR is flawed for several basic reasons:

1. Requirements of the Clean Air Act Amendments of 1977 have not been met.
2. The DEIR is vague and uncertain, especially as to the validity of the projected effectiveness of proposed control measures, the accuracy of the basic inventory, and the reliability of the projections.
3. The DEIR contains apparent inaccuracies relating to proposed control technologies.
4. The DEIR fails to consider alternative measures.

A detailed explanation of these criticisms follows. In the following discussion we are also commenting on the inadequacy of the Draft EMP itself, since the Draft EMP is incorporated into the DEIR by reference (DEIR p. 60).

1. Failure to Comply with PL95-95

ABAG states that the AQMP portion of the Draft EMP is prepared under authority of PL95-95 (DEIR p. 4). If this is so, then the AQMP is inadequate. The plan as drafted fails to comply with PL95-95, the Clean Air Act Amendments of 1977 (CAAA).

The AQMP only addresses the oxidant standard. However, the State of California has classified the Bay Area Region as a nonattainment area for Total Suspended Particulates (TSP) and Carbon Monoxide (CO) as well. Thus, the nonattainment plan for the region must also address measures to meet the TSP and CO standards by the required dates. It fails to do so.

The plan fails to address "reasonable further progress" as required by Section 172(b)(3) of the Clean Air Act (CAA).

The plan fails to identify measures over and beyond reasonably available control measures that would be necessary between 1982 and 1987 to insure attainment of the National Ambient Air Quality Standards (NAAQS) by December 31, 1987. This is required by CAA Sections 172(a)(2) and 172(b)(11)(C). These measures, which may very well be unreasonable (p. 157, House Report No. 95-564, accompanying HR 6161, the 1977 CAAA), must be identified in the State Implementation Plan (SIP) submitted in 1979.

CAA Section 172(b)(4) requires a "comprehensive, accurate, current inventory of actual emissions from all sources". Although the plan contains such an inventory, the plan itself indicates that the inventory is neither current nor accurate. Inaccuracies in the inventory could have a significant influence on the type of control measures instituted on the basis of such inventory.

CAA Section 172(b)(5) requires emissions which will be allowed from construction and operation from major new or modified stationary sources to be expressly identified and quantified. The plan does not address this requirement.

2. Vagueness and Uncertainty in DEIR

The DEIR states (p. 61) that the comprehensive strategy outlined in the EMP will reduce emissions in 1985 almost enough to meet the oxidant standard, without considering reductions from New Source Review (NSR) and Indirect Source Review (ISR). The DEIR further states that the required additional reductions can be achieved through NSR and ISR.

However, the Draft EMP itself states (p. VI-10) that emission reductions could result from NSR and ISR, but that "resulting reductions in emissions cannot now be estimated". In view of the latter statement, we question the validity of the assumption that NSR and ISR will provide enough emission reductions.

This could very well become a critical issue, especially since EPA is understood to be considering an upward revision to the oxidant standard in the not too distant future.

Also, in view of ABAG's statement that emission reductions from NSR and ISR cannot be estimated, how can ABAG possibly claim "significant" emission reductions from NSR? (DEIR Table 3-B, recommendations 9 and 16.)

Another example of vagueness can be found in Table 3-C. Under Recommendation 17 "some sort of retrofitting of older plants" is to be required. This "some sort of retrofitting" is estimated to result in "significant" hydrocarbon emission reductions. How can this estimate be made without knowing exactly the kind of retrofitting which will be required? Will it be RACT (as required by the CAA), or will it be BACT, as proposed by ABAG? BACT has not been defined by ABAG, and ABAG is understood to admit that "more detailed impacts assessment requires further definition of BACT" (AQMP Tech Memo 15, January 1978, p. 3). Further, the term "older plants" must be defined. In the absence of clear definitions of "older plants" and "some sort of retrofitting" this recommendation becomes meaningless.

3. Inaccuracies Relating to Proposed Control Technologies

Union presented testimony on the EMP at the February 8, 1978 public hearing in Berkeley. A copy of our testimony is attached and is hereby made part of these comments on the DEIR. The testimony addresses in detail the apparent inaccuracies in the EMP relating to proposed control technologies.

In addition to the apparent inaccuracies of the EMP, the DEIR itself contains several misleading statements with regard to stationary source controls. The DEIR recognizes that certain stationary source controls are energy consumptive and could thereby create significant adverse environmental effects (p. 72). However, the DEIR goes on to say that these adverse effects can be offset against opposite (i.e. beneficial) effects from other stationary source controls, such as vapor recovery systems. This statement is misleading because all vapor recovery systems addressed in the EMP, with the exception of the balance system, consume energy, sometimes more than they conserve, and they can therefore create adverse, rather than beneficial, effects.

The DEIR then states (p. 72) that "the significant energy savings of other elements of the AQMP ... would minimize the consumption effects of these stationary sources on total energy use". The statement implies some sort of offset for these "consumption effects". This is clearly incorrect because the "consumption effects" are completely unrelated to any energy savings elements of the AQMP.

4. Consideration of Alternative Measures

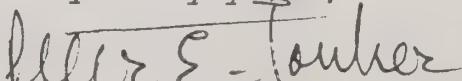
The DEIR is seriously inadequate in its consideration of alternatives.

Several times the statement is made that the "no action alternative is not feasible". This is patently incorrect. The CAA requires states to submit nonattainment plans to EPA, and requires regional agencies to prepare nonattainment plans only where it is possible to do so within the required time. Where feasible, the organization responsible for the AQMP process is to prepare the nonattainment plan (CAA Section 174(a)). This indicates that if ABAG does not prepare a nonattainment plan (the "no action alternative") the state will submit such a plan to EPA. This is clearly an available alternative.

Further, alternatives to specific stationary source controls have not been addressed adequately. Two examples are the alternative of retrofitting existing floating roof tanks with secondary seals, and the alternative of retrofitting existing sources with Reasonably Available Control Technology (RACT), as required by PL95-95, instead of retrofitting with Best Available Control Technology (BACT), as proposed by ABAG. As BACT is as yet undefined by ABAG, the difference between RACT and BACT could be enough to force shutdowns of existing facilities. This would clearly have adverse social and economic effects, and these have also not been addressed in the plan.

Union respectfully requests that it receive notice of any proposed hearing to consider adoption of the DEIR by the Association.

Very truly yours,



Peter E. Jonker
Regulations Coordinator

PEJ/dd

Attachment

Letter from Peter E. Jonker, Regulations Coordinator, Union Oil Company of California, February 28, 1978

Response to General Comments in Paragraph 1

The DEIR was not prepared to meet the requirements of the Clean Air Act Amendments of 1977. Air quality control plans are not subject to the requirements of the National Environmental Policy Act. The DEIR was prepared to meet the requirements of the California Environmental Quality Act of 1970, in which the significant environmental effects of a proposed project are required to be assessed. While the air quality maintenance plan chapter of the Environmental Management Plan addresses the requirements of the Clean Air Act Amendments of 1970, it also meets several requirements of the Clean Air Act Amendments of 1977. Nevertheless, it is not the non-attainment plan required under the 1977 amendments. That plan will be prepared during the first few months of the continuing planning process set forth in the Environmental Management Plan, and appropriate discussion of the environmental, social and economic effects of that plan will be provided. References to the 1977 amendments will be clarified in the text of the EIR. ABAG disagrees with the basic assumption of the second point of this paragraph; while there are uncertainties in the accuracy of the basic inventory, the reliability of the projections and the projected effectiveness of the proposed control measures, this uncertainty is acknowledged in the AQMP itself. The DEIR can only be as certain and explicit as the control measures proposed and the CEQA guidelines indicate that the level of detail of an EIR can vary with the specificity of the proposed project itself. "Validity" is a term whose several meanings defy its application as suggested by Union to the requirement of CEQA that the significant environmental effects of a proposed project be assessed. ABAG cannot respond to the third point of the paragraph, since Union fails to indicate in its comment what the "apparent inaccuracies relating to proposed control technologies" are. The final point of the paragraph is that the DEIR fails to consider alternative measures. Again, Union provides no indication in this paragraph of what these "alternative measures" are that ABAG has failed to consider. Alternatives considered in the development of the AQMP are listed in Table 3 (pages 3-A through 3-U of the DEIR). This table will be revised in the final EIR to indicate proposed actions of the General Assembly.

Response to General Comments in Paragraph 2

Union's statement that the draft EMP is incorporated into the DEIR by reference on page 60 is incorrect. The paragraph in question on page 60 does not incorporate the draft EMP by reference. The paragraph does not incorporate the draft AQMP by reference. Consistent with Article 9, Sections 15140 and 15141 of the "State EIR Guidelines," the section titled "Description of the Project" (page 60 of the DEIR) summarizes the recommended air quality control policies. The detailed description is contained in Volume I of the Draft EMP. Page 60 indicates only that potential environmental, institutional/financial, economic and social impacts of action recommended to carry out the air quality maintenance plan are summarized in the plan recommendation tables in Volume I of the EMP. The DEIR addresses only the CEQA requirements to address the significant environmental effects of the proposed "project." Union Oil's specific comments to the EMP recommendations have been responded to in Volume III (Summary of Public Comments and Responses).

Response to Specific Comment 1

The reference to preparation of the AQMP under the 1977 Amendments to the Clean Air Act on page 4 of the DEIR is in error. Reference to the 1977 amendments, and the authority under which the AQMP was prepared (the Clean Air Act Amendments of 1970) will be clarified in the text of the final environmental document. Other references in the comment are to requirements of the non-attainment plan required under s. 172 (a) of the Clean Air Act, as amended in 1977. These requirements will be addressed by the non-attainment plan to be prepared during the first few months of the continuing planning process set forth in the Environmental Management Plan.

Response to Specific Comment 2

Union, summarizing the text of page VI-10 of the draft EMP, uses two statements out of context to question the statement made on page 61 of the DEIR. The statements in question on page 61 of the DEIR are nearly identical to those of page VI-10 of the draft EMP. The statements in both documents say that NSR and ISR can achieve the necessary reductions to meet, in 1985, the Federal oxidant standard. They also say that continued application of the programs could result in sufficient reductions to ensure long-term maintenance. On page VI-10 of the draft EMP it is also stated that the "resulting reductions in emissions cannot now be estimated. The reductions will depend on the specifics of the permit regulations."

Since AQMP recommendations without NSR will almost meet the standard by 1985, and while the actual resulting reductions in emissions from NSR cannot now be estimated, application of NSR would allow the region to meet the standard in 1985. Union should note the statement made by the BAAPCD staff about emission reductions from NSR to attain the oxidant standard (Attachment C of Union's comments). The term "could" used on page VI-10 of the draft EMP and on page 61 of the DEIR is in reference to the role of NSR and ISR in achieving sufficient reductions to ensure long term maintenance. Union should note that on page VI-10 of the draft EMP, where the term "could" is used, the sentence is followed by "year 2000 projections are inherently subject to greater uncertainty than 1985. Thus the need for more (or possibly less) controls of hydrocarbons in 2000 can be examined again in subsequent AQMP updates." EPA is considering an upward revision to the oxidant standard. If an upward revision in the standard is made, it is even more feasible that the required emission reductions after implementation of all other controls will be achieved through application of the new source review rule. Emission reductions are called "significant" because, as targeted, they are estimated to enable the region to meet the oxidant standard by 1985-87, with the imposition of all other controls recommended.

It is agreed that the "some sort of retrofitting of older plants" recommendation in Table 3-C is vague. However, this was included in NSR and BACT. It is misleading to suggest that ABAG did not define what was meant by BACT in the draft plan. It was defined in the EMP, (page VI-119) as "the use of the most effective technology actually available and proven in use, not necessarily in the Bay Area. It does not include unproven theoretical devices." Specific examples of control technology were listed in the draft plan. Following publication of the draft plan, and AQMP Technical Memorandum 15-Assessment/Evaluation Technical Memorandum 4, January 1978, available control technology and examples of selected

processes were specified in the plan. Specific control processes for specific industries will always require action by the permitting authority--the BAAPCD or the ARB.

Response to Specific Comment 3

Responses to comments made at the February 8 Public Hearing have been responded to in the summary of public hearing testimony and in Volume III. The specific recommendations made by Union in the stationary source controls were adopted by the EMTF, and the Executive Board concurred. The comment on energy savings as a result of the EMP is intended to acknowledge that, viewed as a whole, there should be a net energy savings--not compensation for energy lost--as a result of the AQMP. While certain technologies are energy consumptive, as Union indicates, transportation measures in the plan will reduce energy consumption. Therefore, there should be energy savings as a result of implementation of the AQMP.

Response to Specific Comment 4

The first reference in this comment is to the preparation of non-attainment plans under the Clean Air Act Amendments of 1977. Union is correct in its discussion of which agencies can prepare such plans. However, ABAG is under a contractual obligation to prepare an AQMP under the 1970 Clean Air Act Amendments. Therefore, the DEIR description of "no action" in preparing the AQMP is correct.

Further, Union's description of what is required by the 1977 amendments as an alternative to the recommended BACT of the draft plan is misleading. The 1977 amendments require the attainment and maintenance of specified standards. Among the requirements for non-attainment plans is for reasonable further progress...including such reduction in emissions from existing sources in the areas as may be obtained through the adoption, at a minimum, of reasonably available control technology" (emphasis added). Existing industries in the Bay Area are controlled to a certain extent. Yet the Bay Area fails, under currently implemented programs, to meet the oxidant standard. This indicates that more emission reductions can be achieved from all sources. It is misleading to suggest ABAG did not define what was meant by BACT in the draft plan. It was indicated by the BAAPCD staff participating in the AQMP Joint Technical Staff, and in the EMP itself (page VI-119) as the "use of the most effective technology actually available and proven in use, not necessarily in the Bay Area. It does not include unproven theoretical devices." As a result of actions by the EMTF and Executive Board in recommending a plan to the General Assembly of ABAG, further specificity was added to the stationary source control actions, and included the recommendation Union makes regarding the use of secondary seals. The final EIR will assess the significant environmental effects of the Environmental Management Plan.



Chevron U.S.A. Inc.

575 Market Street, San Francisco, CA 94105
Mail Address: P.O. Box 7643, San Francisco, CA 94120

I. H. Gilman
General Manager
Environmental Affairs

March 30, 1978

RECEIVED
MAR 31 1978

Draft Environmental Impact Report

Mr. Revan A. F. Tranter
Executive Director
Association of Bay Area
Governments
Hotel Claremont
Berkeley, CA 94705

Dear Mr. Tranter:

Chevron has reviewed the Draft Environmental Impact Report (EIR) for the Environmental Management Plan (EMP) for the San Francisco Bay Region and finds that, in its present form, it is inadequate, not in conformance with the requirements of the National Environment Policy Act of 1969 (NEPA) or the California Environmental Quality Act (CEQA), and inconsistent with changes in the EMP made by the Environmental Management Task Force. Specifically the draft EIR does not adequately assess the significant environmental effects of the EMP nor does it adequately consider alternatives to the actions specified in the EMP.

Chevron has these specific comments about the draft EIR to assist you in its revision:

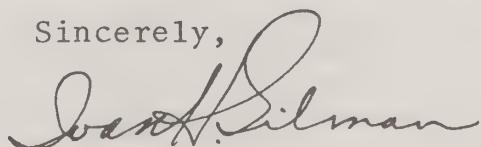
1. Significant environmental effects of the EMP are assessed for the most part only qualitatively. In many instances this approach tends to mislead the reader, for example, the second paragraph on page 61 implies that air pollution in the Bay Region causes a variety of respiratory and other ailments not only for sensitive individuals but for the general population. A better approach would be to indicate present and projected oxidant concentrations at critical points in the region and compare these levels with available health data on the effects, if any, of such levels on public health. The EPA criteria document on oxidants could be used for this purpose.
2. In most of the EIR the only alternative given for the proposed actions in the EMP is no action. Since no action is usually not feasible because of legal requirements, the reader is left with the conclusion that the proposed actions are the only ones possible. In most cases this is simply not true.
3. The discussion of the impacts of the Air Quality Maintenance Plan does not indicate adverse effects on industrial growth of New Source Review for stationary sources. For example, the middle paragraph on page 75 indicates no impact on overall

development of "commercial, industrial and other local services." This statement is contradicted in the draft EMP itself which on page VI-119 states that the New Source Review rule would require "the prohibition of some new industries with significant emissions."

4. The Air Quality Maintenance Plan portion of the draft EIR does not discuss the effects of further controls on carbon monoxide and total suspended particulates. Plans for controlling these pollutants in some parts of the Bay Region will be necessary to gain approval of the Air Quality Maintenance Plan by state and federal officials. Presumably the draft EIR will be further revised and made available for public comment and review when plans for controlling these pollutants are developed later this year.
5. In considering the impacts of the draft EMP, the draft EIR on page 77 states "significant (adverse) environmental effects of each plan are mitigated by the other plans." In reviewing the draft EIR Chevron was unable to determine how this was accomplished. In Chevron's view the various plans are not fully integrated and in fact the draft EMP itself calls for further integration during the Continuing Planning Process. Full disclosure of how the adverse effects of each plan are mitigated by the other plans should be included in the EIR.

As the draft EIR is revised and further time is provided for public review and comment, Chevron reserves the right to provide additional comments. We strongly urge that the revised EIR should be available for public review and comment prior to final action by the ABAG General Assembly.

Sincerely,



cc: Dean Macris, ABAG
Supervisor Rod Diridon

Letter from Ivan H. Gilman, General Manager, Environmental Affairs, Chevron, U.S.A., Inc., March 30, 1978

Response to General Comment of Paragraph 1

The DEIR was prepared for the Draft Environmental Management Plan, as issued in December 1977. Changes to the draft plan were made by the ABAG Environmental Management Task Force, Regional Planning Committee and Executive Board, prior to General Assembly action. A supplement to the DEIR was issued in April 1978. That document noted that "The majority of the changes to the December 1977 version of the Draft EMP involve consolidation, reorganization or changes in responsible agency(s) designation. The significant environmental effects of those changes do not differ from those identified in the original Draft EIR." The supplement did, however, discuss the significant environmental effects of the substitute maintenance measures identified in the EMP forwarded for General Assembly action, because those actions were not included in the Draft EMP and thus not assessed in the Draft EIR. The final EIR will assess the significant environmental effects of the Environmental Management Plan.

Response to Specific Comment 1

Present and projected oxidant concentrations are shown in Section 4 of the air quality chapter (Chapter VI) of the draft EMP. Violation of the oxidant standard occurs throughout the region. While it is true that the paragraph in question presents information in qualitative terms, the recommendations in the draft plan are based on substantial technical analysis. The approach suggested by Chevron should not be taken because it is impossible to select "critical points in the region" while meeting the requirement of the Clean Air Act that the region demonstrate attainment and maintenance of the standard. In addition, the EPA criteria document mentioned is being revised.

Response to Specific Comment 2

While the comment indicates that in most cases there are alternatives to the proposed actions assessed and therefore implies that it is incorrect to indicate the only actions possible are those proposed, Chevron does not indicate specific alternatives to any action in their comments on the DEIR.

Response to Specific Comment 3

The paragraph in question indicates that the air quality maintenance plan is intended to accommodate projected growth in population in the Bay Area. Commercial, industrial and other local services are associated with population growth. While it is true that there will be impacts on certain hydrocarbon emitting industries (these impacts are identified in the impact tables of Volume I of the Environmental Management Plan and the significant environmental effects are assessed in the EIR), the paragraph in question addresses the issue of whether there are any significant

irreversible environmental changes which would be involved in the proposed adoption of the air quality plan. No significant irreversible environmental effects can be ascribed to stationary source controls recommended by the plan.

Response to Specific Comment 4

It is true the air quality maintenance plan portion of the draft EIR does not discuss the effects of further controls on carbon monoxide and total suspended particulate matter. It does not discuss the effects of further controls on other pollutants. It is also true that control measures will be proposed for these pollutants during the continuing planning process, specifically in the preparation of plans under the Clean Air Act Amendments of 1977. Appropriate discussion of the effects of these proposals will be made during the continuing planning process. Since the air quality chapter of the Environmental Management Plan is designed to meet the AQMP requirements of the Clean Air Act of 1970, the draft EIR on this plan does not assess significant environmental effects of controls on other air pollutants.

Response to Specific Comment 5

The paragraph in question on page 77 of the draft EIR refers to mitigation of significant adverse environmental effects of component parts of the plan. Specific discussions of how the component parts of the plan mitigate adverse environmental effects occur throughout the draft environmental document (pages 27-29, 36-38, 42-43, 46-47, 50-53, 59, and 72-73). The fact that the draft plan calls for further integration during the continuing planning process occurs because the plans will be updated, as required. During that process, those plans ought not to be made inconsistent when the EMP's initial recommendations were developed to be consistent. The draft EIR indicates on page 78 that the plan is internally consistent and the recommendations of the four management plans are mutually supportive. Viewed as a whole, they are designed to accommodate substantial growth in the region and achieve a variety of objectives, while at the same time providing that adverse environmental effects of certain control programs (e.g. increased volumes of sludge as a result of water quality requirements) can be mitigated by other control programs (e.g. energy recovery facilities using increased sludge volumes, thereby reducing amounts of sludge projected otherwise to go to landfills). It would be appropriate to include a reference in the paragraph in question on page 77 to the previous discussions on cross-plan mitigation in the final EIR.

Response to General Comment in Final Paragraph

As indicated previously, most of the changes made in the Environmental Management Plan proposed for adoption by the General Assembly were ones of consolidation, reorganization or changes in responsible agency(s) designations. A supplement to the DEIR was prepared and placed in depository libraries in the Bay Area. The comment period on the supplement ends June 1, 1978. Prior to final action on the EMP, the General Assembly will consider the FEIR.

CALIFORNIA MANUFACTURERS ASSOCIATION

923 12th Street P.O. Box 1138 Sacramento, California 95805 916 / 441-5420



March 30, 1978

RECEIVED

MAR 31 1978

ASSOCIATION OF
BAY AREA GOVERNMENTS

Mr. Revan Tranter
Executive Director
Association of Bay Area Governments
Hotel Claremont
Berkeley CA 94705

SUBJECT: Draft Environmental Impact Report for Draft Environmental Management Plan for the San Francisco Bay Region.

Dear Mr. Tranter:

The California Manufacturers Association is extremely concerned with regard to the adequacy of the draft EIR which was prepared by your staff and which constitutes a portion of VOL. II of the draft Environmental Management Plan for the San Francisco Bay Region dated December 1977. It is our understanding that substantive amendments to the EMP have been recommended by the Environmental Management Task Force. Therefore we will not attempt to provide a lengthy or detailed critique of the document at this time as many of the comments may be academic. We assume that a revised EIR will be prepared reflecting the amended EMP.

A few general comments would appear appropriate. The very frequently used phrase "No action did not appear feasible" when discussing one of the proposed actions in the EMP does not provide the reader with any definitive information. In our judgment, we believe it preferable to provide the community with a reasonably detailed quantitative assessment of the environmental impact, both with and without acceptance of the ABAG Staff proposed action and with an assessment of some intermediate level of achievement for selected actions. Certainly the economic impact of these levels of environmental controls also needs to be made perfectly clear to the concerned community. Our interpretation of the manner in which the EIR was presented leaves one to feel that it is an "all or nothing" situation, whereas we are confident that a number of actions either by themselves, or combined with others in a phased implementation schedule would achieve the environmental quality goals endorsed by the community.

In a somewhat related issue, we find that appendix A to the draft EIR "Candidate Control Measures for the Environmental Management

Spokesman for California Industry

Mr. Revan Tranter

Page 2

March 30, 1978

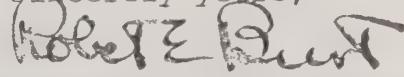
Plan" contains a listing of these measures but fails to have an assessment or discussion of the environmental or economic impact of these measures. I presume these candidate measures were in some manner reviewed with the "Assessment Check List" contained in Appendix B of the draft EIR. However we are unable to find any documentation of this review process. We believe the ABAG Staff assessment for these candidate measures should be identified. While we cannot, at this time, state whether we or other members of the community would agree or disagree with your Staff assessments, we believe the information is important to all concerned persons both in terms of complying with legal requirements and in terms of their environmental and economic impact.

This Association is aware the ABAG Staff has been under a rather severe time restriction to prepare the numerous technical memoranda and the final draft EMP and draft EIR. Much of this effort is commendable, although numerous errors and gaps in information are apparent. We also believe the integration of the various elements of the EMP needs to be improved. We would also believe that the confusion between the EMP and EIR needs to be improved. For example, Water Quality Management Plan Policies #10, 11 & 12 in the draft EIR do not relate to similarly numbered policies in the draft EMP. There may be others, although, in the limited time during which these voluminous documents have been available, we frankly have not made a complete cross-check between the volumes. We urge that more time and care be taken when preparing the amended proposed Environmental Management Plan and Environmental Impact Report.

The potential environmental and economic impact of your program is of immense magnitude not only to the Bay Area but ramifications of your program will undoubtedly also have an impact on other areas in the state of California and will likely have national implications. A careful and thoughtful preparation and a full assessment of concerned persons is deemed desirable, if not essential.

I trust these brief general comments are helpful and look forward to receiving the final reports prepared by the ABAG Staff on this subject. I am hopeful these will address the economic and environmental issues more fully.

Sincerely yours,



Robert E. Burt, Director
Environmental Quality Department

California Manufacturer's Association, Robert E. Burt, Director
Environmental Quality Department, March 30, 1978

Response to Paragraph 2

The EMP is an integrated environmental management plan for the nine-county San Francisco Bay region. The goal statement for the plan places this plan in the proper perspective:

"The goal....is to produce a plan...that will look to the greatest possible improvement in water and air quality and problems caused by solid waste and...that will lead to compliance with Federal and State standards and objectives at the earliest possible date....without social, economic and environmental effects so unacceptable as to prevent implementation."

The plan is a comprehensive one for the protection of the Bay Area's water and air quality, for the effective management of the region's water supply, and for solid waste management. These problems are interrelated. Therefore the plan is integrated--to ensure that solutions to one set of environmental problems do not have adverse effects on other environmental problems, or, if such adverse effects are identified, to ensure that appropriate mitigation measures are developed. For example, the wastewater facilities programs recommended in the plan will increase the volumes of sewage sludge, which may contribute to the solid waste problem. The solid waste plan, therefore, deals with resource recovery and effective use of the sludge. Yet while the plan as a whole is integrated, the individual parts of the plan are designed to satisfy different regulatory requirements. As an example, the air quality maintenance plan has to meet very explicit, quantitative standards (e.g. demonstrate numerical attainment of the Federal photochemical oxidant standard of 0.08 ppm and maintenance in a specified time frame). on the other hand, the surface runoff portion of the water quality management plan is required to identify non-point sources of pollution and set forth procedures and methods, e.g. best management practices, to control the sources to the extent feasible. Unlike point source pollution control, no quantitative effluent standards to meet the water quality standards in the receiving water body govern the nonpoint source control programs selected in each county.

All of these conditions influenced the development of the plan. It is a policy level plan with associated implementing actions. The plan will be carried out by many levels of government--Federal, State, regional, counties, cities, and special districts--as well as by private interests. This fact particularly affects the level of detail presented in the plan. It is not, nor should it be, of project specific detail in either the exact specification of controls or the manner of implementation. That level of specificity is a subsequent step in environmental control planning (e.g. the 201 facilities planning process, air quality control technology assessment, etc.). As a result, the range of possible alternatives differs from plan to plan. The alter-

natives considered and the policies and actions recommended emanate from extensive technical analysis and assessment. The DEIR discussion of alternatives describes the feasible alternatives to each plan as a whole and the policies that compose each plan. In a majority of the cases, there were specific alternatives to each recommended policy, either of a technical or administrative nature. Given the divergence of statutory and regulatory requirements in combination with technological considerations, the alternatives may not always be as numerous as one is used to reviewing in a project level DEIR. The no action alternative is one alternative that must always be considered in preparation of a plan or project, and in several cases it was the only feasible alternative for consideration. In no case was "no action" feasible for recommendation. Given that there are substantial environmental problems that remain to be solved in the Bay Area and given the assigned, contractual obligation to develop a plan to do that, the "no action" alternative would not meet either the goals of the plan or the contractual obligations.

It is agreed that the plan is not an "all or nothing" situation. The plan will be implemented in phases. As noted on the plan implementation tables in Volume I of the EMP, actions are scheduled for implementation at various times during the next ten to twenty years. Additionally, an important ingredient is the continuing planning process. That mechanism allows for changing conditions, data and requirements to be considered and factored into future plans and recommendations.

Response to Paragraph 3

The point is well taken. Only one aspect of the environmental management planning process that led to the development of the EMP, the assessment/evaluation process, was described in some detail in the DEIR. The parallel technical planning process was not acknowledged. As a result of this comment and similar comments raised by other reviewers of the DEIR, the FEIR will include text indicating the technical analysis that was also the basis for plan development.

Response to Paragraph 4

Every attempt will be made in writing the FEIR to ensure consistency in references to the numbered policies in the EMP.



EAST BAY MUNICIPAL UTILITY DISTRICT 1000 12th Street, Oakland, California 94604 (415) 455-1100

March 30, 1978

Mr. Revan A. F. Tranter
Executive Director
Association of Bay Area Governments
Hotel Claremont
Berkeley, California

Dear Mr. Tranter:

We have reviewed Volume II of the Draft Environmental Management Plan for the San Francisco Bay Region, and we have the following comments:

1. The Draft EIR incorporates, by reference, Volume I of the Draft Environmental Management Plan. EBMUD submitted specific comments on Volume I to the Environmental Management Task Force by letter addressed to Supervisor Diane Feinstein, Chairperson of EMTF, on January 24, 1978. That letter is hereby made part of our comments on the Draft EIR in Volume II.
2. The Environmental Management Task Force made substantial revisions to the plan recommendations in Volume I before forwarding it to the ABAG Executive Board, and we understand that ABAG staff is rewriting the narrative sections of Volume I to conform to the EMTF amendments. Volume II should be revised to be consistent with Volume I as amended by EMTF and rewritten by ABAG staff.

Very truly yours,

A handwritten signature in black ink that reads "John D. Barnes".

Enclosure

RECEIVED

MAR 31 1978

ASSOCIATION OF
BAY AREA GOVERNMENTS



RECEIVED MAR 31 1978
ASSOCIATION OF BAY AREA GOVERNMENTS

Letter from John Harnett, General Manager, East Bay Municipal Utility District,
March 30, 1978

Response to Comment 1

The DEIR does not incorporate the Draft EMP by reference. Article 9 Section 15140 (c) and (d) (Contents of Environmental Impact Reports) of the "State EIR Guidelines" allows summarization of information, inclusion of supporting information as appendices that need not be attached to the body of the DEIR and reference to all documents used in the preparation of the DEIR including citations to pages. References to the Draft EMP are for the purposes allowed by Article 9 and not to incorporate that document en toto. The EBMUD letter on the Draft EMP was responded to and is a part of Volume III Summary of Public Comments and Responses April 1978.

Response to Comment 2

- The Final EIR will be consistent with the Environmental Management Plan referred to and adopted by the General Assembly.

MCCUTCHEON, BLACK, VERLEGER & SHEA
COUNSELORS AT LAW
THIRTIETH FLOOR
3435 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90010
TELEPHONE (213) 381-3411
TELEX: 698261

RECEIVED

APR 6 1978

ASSOCIATION OF
BAY AREA GOVERNMENTS

April 5, 1978

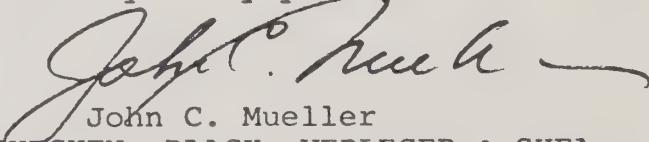
Association of Bay Area Governments
Environmental Management Task Force
Hotel Claremont
Berkeley, California 94705

Dear Members:

In a February 27, 1978, telephone conversation with Ms. Barbara Reagan from ABAG, our office learned that the deadline for submitting comments on the Draft Environmental Impact Report (DEIR) to the Draft Environmental Management Plan had been extended to April 6, 1978. Pursuant to that extension and on behalf of the Western Oil and Gas Association, we herein submit the enclosed comments on the DEIR for your consideration.

If you have any questions with regard to the foregoing matter, please do not hesitate to call.

Very truly yours,



John C. Mueller

For McCUTCHEON, BLACK, VERLEGER & SHEA
Attorneys for WESTERN OIL and GAS ASSOCIATION

JCM/rs

Enclosure

MCCUTCHEN, BLACK, VERLEGER & SHEA
COUNSELORS AT LAW
THIRTIETH FLOOR
3435 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90010
TELEPHONE (213) 381-3411
TELEX: 698261

April 5, 1978

Association of Bay Area Governments
Environmental Management Task Force
Hotel Claremont
Berkeley, California 94705

Dear Members:

The Western Oil and Gas Association (WOGA) appreciates the opportunity to comment on the December, 1977, Draft Environmental Impact Report (DEIR) to the Draft Environmental Management Plan (DEMP) for the San Francisco Bay Region. Although it appears that the Association of Bay Area Governments (ABAG) has devoted a considerable amount of time to the preparation of the DEIR, WOGA respectfully urges that it not adopt the DEIR in its present form. While we appreciate the complexities inherent in drafting an EIR for a Plan of this magnitude, it is our view that the DEIR fails to comply with the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

GENERAL CRITICISMS

Before discussing the inadequacies of the DEIR in some detail, WOGA offers the following general criticisms:

1. The DEIR is replete with conclusory statements wherein no information or data is offered to support the conclusions, nor are the sources for such conclusions specifically cited, as required by Cal. Public Resources Code § 21061.
2. Since, by and large, the only alternative to each proposed action addressed in the DEIR is the alternative of "no

action" the reader is misled into thinking that no feasible alternatives to the proposed project exist. Such alternatives do exist, and the DEIR must address them. Cal. Public Resources Code § 21100(d).

3. The DEIR fails to assess the potential risks to the long-term productivity of the environment which would be effected by the DEMP. Cal. Public Resources Code § 21100(e).

Although this letter will address each of the four plans proposed in the DEMP, the Air Quality Management Plan (AQMP) will be considered first since it appears to be the most seriously flawed, and it has the greatest potential impact on the members of WOGA.

I. THE AIR QUALITY MANAGEMENT PLAN

Although the AQMP purports to be the state implementation plan for the Bay Area (DEIR at 74), the plan fails to comply with certain requirements of the federal Clean Air Act. Specifically, the AQMP fails to include a non-attainment plan provision for total suspended particulates (TSP) and carbon monoxide (CO). Since California has designated the Bay Area a non-attainment area for CO and TSP, § 172 of the Clean Air Act requires that the state implementation plan include a non-attainment plan provision with respect to those pollutants.

Secondly, while the stationary source control strategy proposed is the imposition of best available control technology (BACT) (DEMP at VI-9 and VI-71), the DEIR fails to consider whether reasonably available control technology (RACT) is a feasible alternative to the imposition of BACT. The consideration of the RACT alternative seems especially appropriate since § 172 of the Clean Air Act requires such a control strategy.

Third, the AQMP fails to comply with § 172 (a)(4) of the Clean Air Act in that the plan does not include "a comprehensive, accurate, current inventory of actual emissions from sources. . ." Although an emissions inventory is set out in the DEMP at VI-44 through VI-46, the explanation of this inventory in the DEMP itself indicates that the inventory is current only through 1975, and does not fully define the emission sources of suspended particulate matter as § 172 (a) (4) requires. (DEMP at VI-42 through VI-43.) It is just common sense to note that it will be difficult in the extreme to decide on necessary control measures without having an accurate inventory of specific emission sources in the area.

In addition to its failure to comply with the requirements of the Clean Air Act there are certain inconsistencies between the DEIR and DEMP which render the DEIR inadequate. For example, in the DEIR at Page 75 ABAG suggests that the implementation of the policies of the AQMP "should not result in irreversible changes to the environment." In the next sentence the DEIR states, "[D]evelopment will occur to accommodate the growth of the region's population and associated commercial, industrial and other local services." However, in the DEMP at VI-119, ABAG contends that implementation of the New Source Review rules would result in "[t]he prohibition of some industries with significant emissions. . ." Clearly, the DEIR ignores this finding and fails to address whether economically feasible alternative strategies would mitigate the effects of emissions from new industries, in contrast to the drastic step of prohibiting the construction of such industries.

A far more pervasive defect in the AQMP is its failure to quantify with any degree of certainty the actual emission reduction which the proposed control strategies purport to achieve. For example, at page 61 of the DEIR, ABAG asserts that the comprehensive strategy of the AQMP "will almost reduce emissions in 1985 enough to meet the federal ambient oxidant standard of 0.08 ppm" without adding in the hydrocarbon emission reduction which could result from New Source Review (NSR) and Indirect Source Review (ISR). The DEIR then proposes that NSR and ISR will reduce the emissions just enough to bring the Bay Area within the federal standard. Yet, nowhere does the DEIR or the DEMP quantify the degree to which the AQMP strategy will reduce emissions without NSR or ISR. Nor does the DEIR or the DEMP quantify the amount of emission reduction that NSR and ISR will achieve to

Association of Bay Area Governments

Page 4

April 5, 1978

bring the Bay Area into compliance with the federal standard. Indeed, the DEMP at Page VI-10 admits that NSR and ISR permits will be granted on a project-by-project basis and thus "reductions in emissions cannot now be estimated."

Therefore, the DEIR is defective in two respects. First, the DEIR fails to establish that the federal oxidant standard will be met since, admittedly, the amount of emission reduction through NSR and ISR cannot now be estimated. Second, if indeed the control strategy can reduce emissions of hydrocarbons "almost" to the point of federal compliance without NSR or ISR rules, the DEIR fails to address whether the de minimis degree of reduction needed for federal compliance could be achieved by a strategy which has less severe economic consequences than NSR or IRS.

In addition to its failure to comply with the requirements of the Clean Air Act as well as the inherent inconsistencies and uncertainties of the DEIR, the report fails to address adequately certain feasible alternatives to the proposed action. Particularly absent is a discussion of feasible alternatives to the proposed stationary source controls. Although Table 3-a through 3-u of the DEIR suggests and rejects numerous alternatives to the AQMP, the DEIR fails to consider, adopt, or reject some obvious stationary source control alternatives. For example, the DEIR fails to consider the alternative of retrofitting existing floating roof tanks with secondary seals. Furthermore, the DEIR fails to consider the alternative of applying RACT to existing sources as opposed to the application of BACT.

In addition, the AQMP fails to define the exact kind of source controls which would comprise BACT. Although the DEIR alludes to "the installation of pollution control equipment such as scrubbers, secondary vacuum systems, and vapor and solvent recovery systems," (DEIR at 61) as source controls, the AQMP does not define whether such controls amount to currently applicable BACT, nor does it assess the effect of such controls on the maintenance and enhancement of long-term productivity within the Bay Area. Thus, depending on what ABAG means by BACT, the application of such controls might result in the shutting down of certain industrial facilities within the Bay Area at the expense of the long-term productivity of the environment.

The DEIR spends considerable time discussing its proposed actions to implement general policy IV-- alter region wide development patterns to reduce automobile travel by means of local and regional policies on land use and urban services. However, WOGA submits that the discussion of this compact development policy fails to consider certain significant effects of compact growth. For example, assuming compact development reduces total emissions in the Bay Area, such development may increase the potential for concentrated localized pollution. Furthermore, since compacted living generally increases the likelihood of increases in the crime rate as well as the disease rate in the compacted area, these adverse effects should have been addressed in the DEIR. WOGA submits that the AQMP portion of the DEIR should not be adopted until the inadequacies described above are cured, and WOGA is given a full opportunity to comment upon any revision in the DEIR.

II. THE WATER QUALITY MANAGEMENT PLAN

With respect to the Water Quality Management Plan (WQMP), WOGA is unable to comment fully on the potential adverse environmental effects associated with the increased volumes of sewage solids which purportedly will result if the waste water treatment recommendations are implemented. This is because the DEIR has deferred its analysis of such effects until the San Francisco Bay Region Waste Solids Study has completed its own regional plan and its own environmental impact report on that plan. The EIR for the Waste Water Solids Study is to be completed in the Spring of 1978. (DEIR at 28). Since the major significant environmental effect of the WQMP is the generation of sewage solids, there appears to be little practical purpose in commenting on the WQMP until the Waste Water Solid Study is completed.

It may be useful, however, at this point to comment on the inadequacy of the mitigation measures proposed to minimize adverse effects such as dust pollution, surface runoff, noise, and energy use which are related to the construction of water treatment facilities. Without quantifying the potential harm of such environmental effects, the DEIR merely notes that these effects will be minimized by "noise and dust abatement measures, careful engineering design, and siting measures." (DEIR at 27).

WOGA submits that such a qualitative description of the mitigating measures proposed will not satisfy section 21061 of the Cal. Public Resources Code which requires that the environmental impact report be a "detailed statement" of the matters specified in sections 21100 and 21100.1, including proposed mitigation measures. (Cal. Public Resources Code § 21100(c)).

In addition to the above criticism, WOGA submits that Policy 11 -- monitor effectiveness of existing arrangements for preventing and cleaning up oil and chemical spills -- is unnecessary. WOGA believes that the current data collection system and coordinated prevention efforts with respect to oil and chemical spills provide sufficient environmental protection. Nevertheless, in its discussion of alternatives to Policy 11 (DEIR at 34) ABAG makes the conclusory statement that "sharing of collected data is inadequate" and "coordinated preventative efforts are not the norm." These conclusory statements which ABAG offers as its basis for implementing Policy 11 do not satisfy the requirement of Cal. Public Resources Code § 21061 which requires that the agency drafting an EIR must set out the information or data upon which it bases its conclusions or specifically cite the source of such conclusions.

III. THE WATER SUPPLY MANAGEMENT PLAN

The Water Supply Management Plan (WSMP) suffers from the same vagueness as the WQMP and the AQMP. For example, the WSMP suggests that a potential adverse environmental effect of waste water reclamation is that such reclaimed waste water may "contain bacteria, virus or other substances harmful to public health." (DEIR at 42-43). However, the DEIR goes on to assert that, "[c]ontrolling the use of reclaimed water through research and monitoring would minimize the potential for significant (adverse) environmental effects and health effects." (Id.) It seems particularly inconsistent for the AQMP to require BACT as the control strategy to minimize the effects of air pollution, and yet the public will be protected from the harmful effects of bacteria and viruses by the inexact and vague standard of "research and monitoring." This inherent vagueness renders the DEIR inadequate.

As a general comment, it should be noted that the WSMP was developed in response to the drought conditions in the Bay Area during 1976 and 1977. However, there is a notable absence of any discussion with respect to the vast water supply that has resulted from the winter precipitation in 1978. The potential consequences from a recurring pattern of drought conditions and flood conditions should be addressed in the WSMP.

IV. THE SOLID WASTE MANAGEMENT PLAN

The Solid Waste Management Plan (SWMP) also suffers from inherent vagueness and unsupported conclusions. Again, "noise and dust abatement measures, careful engineering design, and siting measures" are inherently vague measures by which to minimize the significant environmental effects of the construction of a waste water solids management facility. (DEIR at 52.)

The SWMP also contains conclusory and unfounded statements. Policy 9 of the SWMP states that "federal and state governments should adopt legislative and administrative changes that promote waste reduction." (DEIR at 49.) The DEIR rejects the "no action" alternative to Policy 9 by concluding, "[a]nother alternative considered was to recommend that industries change manufacturing processes to promote waste reduction. In general, industries will change manufacturing processes to reduce waste only if adequate incentives exist to do so." (DEIR at 57.) Such a statement is particularly conclusory and biased, and is a wholly inadequate analysis of the alternative of voluntary waste reduction.

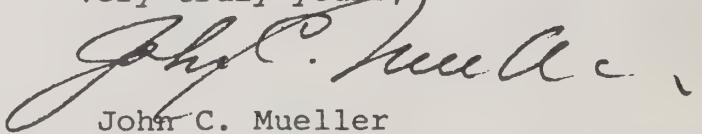
Similarly, the discussion of alternatives to Policy 11 is inadequate. Policy 11 states that "federal and state governments should adopt legislative and administrative changes to improve competitive positions of secondary materials and products containing secondary materials." (DEIR at 49). The discussion of alternatives to Policy 11 states, "[a]nother alternative considered was to recommend that industries improve the competitive position of secondary materials and products containing secondary materials. This action was not selected. In general, industries appear unwilling to introduce such changes to the market system by themselves, in other words, without public (government) support." Again, the last sentence quoted is conclusory and biased. It is

Association of Bay Area Governments
Page 8
April 5, 1978

not the kind of detailed analysis of alternatives envisioned in CEQA.

All the above comments focus on the more glaring deficiencies in the DEIR with particular emphasis on the inadequacies of the AQMP portion. WOGA sincerely hopes that these comments will be given serious consideration in any future revisions of the DEIR, and it looks forward to making further comments with respect to such revisions. We trust that ABAG will view the foregoing criticisms as constructive ones made in our mutual desire to adopt a comprehensive EMP "balancing environmental goals with social and economic goals" (DEMP at II-1) without undue delay.

Very truly yours,



John C. Mueller

For McCUTCHEON, BLACK, VERLEGER & SHEA
Attorneys for the WESTERN OIL and GAS ASSOCIATION

JCM:rs

Letter from John C. Mueller, for McCutchen, Black, Verleger & Shea,
Attorneys for Western Oil and Gas Association, April 5, 1978.

Note: This letter was received after the published deadline for comments on the DEIR, March 31, 1978. However, because the letter refers to a telephone conversation in which it may have been indicated that the deadline for comments had been extended until April 6th, responses to the comments were prepared as a courtesy to Mr. Mueller.

Response to General Comment 1

The "conclusory" statements in question in the DEIR are based on substantial technical analysis described in Volume I of the Draft EMP and numerous technical memoranda. A listing of these technical memoranda appear in the water quality, water supply, solid waste, and air quality chapters (Chapters III, IV, V, and VI). There is no requirement in the Public Resources Code section cited by WOGA that the "sources for such conclusions" be specifically cited. Section 21061 of CEQA requires that an EIR be a detailed statement setting forth specified matters, and that information relevant to such a statement "need not be repeated in its entirety in such statement, but may be specifically cited as the source for conclusions state therein... (emphasis added)". Clarifying text will be added to the FEIR indicating that the recommendations assessed in the EIR for the significant effects on the environment are based on substantial technical analysis, presented in summary form in Volume I of the EMP, and numerous technical materials contained in several explanatory appendices to the plan.

Response to General Comment 2

Alternatives to the proposed actions of the EMP are described in the DEIR. WOGA's comment is that "by and large, the only alternative to each proposed action addressed in the DEIR is the alternative of 'no action', the reader is misled into thinking that no feasible alternatives to the proposed project exist." The section cited by WOGA as requiring the EIR to address the alternatives (Section 21100) requires that the EIR be prepared "setting forth the following:

- (a)
- (b)
- (c)
- (d) Alternatives to the proposed project".

The DEIR sets forth alternatives to the policies of the various plans and the EMP as a whole. In some cases, the only alternative to the proposed

action was "no action". WOGA fails in its general comment to indicate any "feasible alternatives" to the proposed actions.

Response to General Comment 3

WOGA complains that the DEIR "fails to assess the potential risks to the long-term productivity of the environment which would be effected (sic) by the DEMP." Section 21100 (e), of CEQA, requires that the EIR set forth the "relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity." How WOGA infers the term "risk" from this subsection is unclear. Since productivity in the CEQA context can only be considered in terms of "the environment" (defined in Section 21060.5 of CEQA as the "physical conditions which exist within the area which will be affected by a proposed project, including air, land, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance"), it is important to note that the DEIR indicates the relationship between the local short-term uses of man's environment and the maintenance and enhancement of long-term productivity on pages 36,45-46,59,75, and 78. The same topic is addressed in the supplement to the DEIR covering measures for long-term maintenance of the Federal photochemical oxidant standards not assessed in the DEIR. Recommendations of the EMP contribute to long-term productivity of the physical environment of the San Francisco Bay Region.

Response to Air Quality Specific Comment 1

It is agreed that the reference on page 74 of the DEIR to the 1977 amendments is in error. It will be corrected to refer to the 1970 amendments. Section 172 of the Clean Air Act Amendments of 1977 requires the preparation of a non-attainment plan. Although the AQMP meets certain requirements for a non-attainment plan, it does not meet others. In the continuing planning process, the AQMP will be revised to meet the non-attainment plan requirements of Section 172.

Response to Air Quality Specific Comment 2

The comment refers specifically to Action 3 of the Draft AQMP, calling for the imposition of Best Available Control Technology. Best available control technology was defined in the AQMP as technology available and proven in use, not necessarily in the Bay Area. It did not include unproven technology. The comment about RACT made by WOGA is misleading. Section 172 specifies the requirements for a non-attainment plan under the 1977 amendments. The AQMP is not a non-attainment plan; therefore, the comment about RACT is not relevant to the AQMP. In addition, WOGA's comment about the requirement that RACT be applied is not entirely accurate. The Clean Air Act requires attainment and maintenance of the Federal oxidant standard, to be achieved by the imposition, at a minimum, of RACT (emphasis added). Since publication of the Draft EMP and DEIR, Action 3 of the AQMP was modified to provide a specific definition of technology requirements and does

not use either "best" or "reasonably" in its definition. The final EIR assesses the significant environmental effects of the proposed EMP.

Response to Air Quality Specific Comment 3

The requirement cited by WOGA from the 1977 Clean Air Act Amendments does not apply to the AQMP since the AQMP is not the non-attainment plan required by Section 172 of the Clean Air Act.

Response to Air Quality Specific Comment 4

WOGA complains that the DEIR, in discussing the "irreversible changes to the environment" ignores a finding of the EMP that certain industries would not be permitted to locate in the region through the implementation of the new source review rule, and therefore fails to address "economically feasible alternative strategies" to mitigate the "effects of emissions from new industries, in contrast to the drastic step of prohibiting the construction of such industries". Failing to allow construction of a new industry cannot possibly be interpreted as an "irreversible change to the environment as defined by CEQA.

Response to Air Quality Specific Comment 5

WOGA asserts that "nowhere does the DEIR quantify the degree to which the AQMP strategy will reduce emissions without NSR or ISR. It also asserts that the documents do not quantify the amount of emission reduction that NSR and ISR will achieve to bring the Bay Area into compliance with the Federal standard. Estimated emission reductions without NSR and ISR were estimated on Page VI-110 of the EMP. WOGA's first complaint is, therefore, without foundation. As to the second point, it should be noted that both documents say that NSR and ISR can achieve the necessary reductions to meet, by 1985, the Federal oxidant standard. They also say that continued application of the programs could result in sufficient reductions to ensure long-term maintenance. On page VI-10 of the draft EMP, it is also stated that the "resulting reductions in emissions cannot now be estimated. The reductions will depend on the specifics of the permit regulations."

Since the AQMP recommendation without NSR will almost meet the standards by 1985, and while the actual resulting reductions in emissions from NSR cannot now be estimated, application of NSR would allow the region to meet the standard by 1985. The term "could" used on page VI-10 of the draft EMP, and on page 61 of the DEIR, is in reference to the role of NSR and ISR in achieving sufficient reductions to ensure long-term maintenance. WOGA should note that on page VI-10 of the draft EMP, where the term "could" is used, the sentence is followed by "year 2000 projections are inherently subject to greater uncertainty than year 1985. Thus, the need for more (or possibly less) controls of hydrocarbons in 2000 can be examined again in subsequent AQMP updates." EPA is considering an upward revision to the oxidant standard. If an upward revision in the standard is made, it is even

more feasible that the required emission reductions after implementation of all other controls will be achieved through application of the new source review rule.

The DEIR addressed the significant environmental effects of the proposed EMP. CEQA does not require that a DEIR address whether certain actions can be taken that have "less severe economic consequences". In addition, the definition of available technology, added to the AQMP, allows for economic considerations in the regulations regarding technological requirements for selected industries.

Response to Air Quality Specific Comment 6

WOGA complains that depending on what ABAG means by BACT, the application of such controls might result in the shutting down of certain industrial facilities within the Bay Area, and at the expense of the long-term productivity of the environment. WOGA is directed to the definition of "the environment" contained in Section 21060.5 of CEQA. Stationary source controls included in the AQMP should not interfere with long-term productivity of the environment, as defined by CEQA. Rather, they should contribute to long-term productivity of the environment.

Response to Air Quality General Comment 7

WOGA is incorrect in asserting that "localized pollution increases" resulting from the compact development recommendations from the AQMP, are not assessed in the DEIR. This potential is indicated on Pages 66-68 of the DEIR. "Crime" and "disease" do not fall within CEQA's definition of the "environment". It is unlikely that compact growth recommendations would lead to increases in "crime rates" or "disease rates". Such comments are conclusory and unsubstantiated. There is no agreement in the social science community that "high density" living in and of itself contributes to increases in "crime" and "disease". Compact growth recommendations should not be referred to as contributing to "high density" living. The compact growth recommendations were assumed in the year 2000 to result in densities averaging, region-wide, as about the same as densities now existing in the region. The final EIR will delete references to the significant environmental effects of the compact growth recommendations, since they are not recommended in the EMP proposed for General Assembly adoption.

Response to Water Quality Comment 1

The WQMP, like the entire EMP, is a policy level management plan for the nine-county San Francisco Bay Region. The Plan will be carried out by many levels of government. It is not, nor should it be, of project specific detail in either the exact specification of controls or the manner of implementation. That level of specificity is a subsequent step in environmental control planning (e.g. the 201 facilities planning process). As a result, the level of specificity of significant environmental effects and mitigation measures for the EMP differs from those for a project-specific EIR. As noted in the DEIR, detailed planning and impact assessment will take place in subsequent steps when specific projects are proposed by specific agencies. At that point in time the implementing agency will be responsible to complying with CEQA requirements for the proposed project.

Article 9 (Contents of Environmental Impact Reports) Section 1514(e) of "State EIR Guidelines" notes that "The EIR should discuss environmental effects in proportion to their severity and probability of occurrence." In writing the DEIR for the EMP that direction was critical. As noted above, the EMP is not project specific. As a result, the significant environmental effects generally associated with a class of actions are described and measures generally available to mitigate the identified adverse effects are identified. With respect to the most specific component of the WQMP, the 20-year project list, this approach is particularly merited. There are more than 100 projects on that list. Many of them are totally new sewerage treatment facilities, others are additions or expansions to existing facilities. Depending on many conditions, prime among them the availability of Federal and State financial assistance, the projects may (or may not) be constructed at varying points over the next twenty years. Their inclusion on the list does not assure that they will be either funded or constructed but merely ensures their eligibility for funding. They remain subject to NEPA and CEQA requirements as projects as well as to other requirements of the 201 facilities planning process and the Clean Water Grants Program. Because the exact project specifications are unknown now, the exact significant environmental effects are unknown. However, the general nature of potential significant environmental effects associated with sewerage treatment facilities is common knowledge and it is possible to outline those kinds of effects that could be associated with the projects on the list, should they be constructed, and note the general nature of mitigation measures that could be applied to reduce the potential adverse effects. Again, as stated here, in the DEIR and in Volume I of the EMP, the implementing agency(s) for the project(s) will have to comply with CEQA requirements when and if the project is undertaken. Nothing in the EMP or EIR exempts these projects from the requirements of CEQA.

Response to Water Quality Comment 2

In addition to the role of the assessment process, described in some detail in the DEIR, a technical analysis process also forms the basis of the EMP recommendations and alternatives considered and not selected.

Reference to that process and a listing of technical memoranda and reports will be noted in the FEIR.

Following public review and comment, especially from the oil companies operating in the region, the EMTF revised the implementing actions for the WQMP policy on oil and chemical spills (Policy 12). Appropriate changes will be made in the FEIR.

Response to Water Supply Comment

Again, WOGA intimates that the EMP could and should describe in detail every potential specific adverse effect that could possibly occur should projects emanate from the policy statements in this plan.

This particular criticism is aimed at SWMP policy 3 "Encourage reuse of wastewater where cost effective" (since reworded as "Encourage safe and cost-effective wastewater reclamation"). WOGA is referred to the response to the level-of-detail criticism on the WQMP. This policy statement is no different. Before a wastewater reclamation project is undertaken, a project specific EIR will be prepared. Moreover, as noted in the DEIR, the State Health Department has overall responsibility for approving standards for and uses of reclaimed wastewater. Further research on uses of reclaimed wastewater and monitoring at pilot project/research sites will provide more and better information about environmental and health effects.

Comparison between AQMP recommendations and other plans are not valid as the requirements governing the contents of the plan differ substantially. The DEIR does not infer that research and monitoring will protect public health. Controlled use, continued research and monitoring will minimize the potential for adverse environmental effects and public health effects.

The DEIR is a good faith effort at full disclosure and providing information about the potential adverse environmental effects of an environmental plan prepared to benefit the environment. Given the level of detail of the EMP, the level of detail on environmental effects is what is feasible to indicate. More detail is feasible for a project specific EIR and those will be required before any site-specific project is undertaken.

Response to Water Supply Comment 2

While it is true that the worst drought of record was the existing condition in the region during development of the EMP, the recommendations in the WSMP are those of wise water resource management that are irrespective of drought or any other naturally occurring condition. It is not within the scope of this plan to address issues of the nature of WOGA's request.

Response to Solid Waste Specific Comment 1

WOGA is referred to the response to the level-of-detail criticism on the WQMP.

Response to Solid Waste Specific Comment 2

WOGA is referred to the response to General Comment 1. In addition, and specific to this point, industry representatives on the Solid Waste Advisory Committee urged ABAG to include recommendations on incentives for the very reason WOGA complains is "conclusory and unfounded. In addition, under the provisions of the Resource Conservation and Recovery Act, EPA is required to assess "incentives and disincentives" of various public policies for resource conservation. It can therefore be reasonably assumed that Congress has found incentives are among the appropriate techniques to be used to promote resource conservation. Such incentives are one of the techniques advocated in the solid waste management plan.

Response to Solid Waste Specific Comment 3

WOGA is referred to the response to General Comment 1 and Solid Waste Specific Comment 2. In addition, WOGA misinterprets the intent of CEQA as requiring a "detailed analysis of alternatives." CEQA requires that alternatives be set forth, and that reasons be stated why the alternatives were not chosen. See also the response to the California Manufacturers' Association comments on the DEIR.

Responses to Comments on the DEIR Included in
Letters on the DEMP (Comments Summarized)

<u>Comments</u>	<u>Responses</u>
Comments 1-8 from Assessment Advisory Committee member Stephen L. Brown, Director, Center for Resource and Environmental Systems Studies, SRI International, January 23, 1978	
1. The Draft EIR refers, page 50 and elsewhere, to "impacts on air and water quality", "energy effects" etc. with no hint at direction (adverse or beneficial) of the impact.	In all cases in the Draft EIR, the first discussion under the heading "The Significant Environmental Effects of the Proposed Project" discusses adverse and beneficial environmental effects of plan recommendations. Staff listed impacts and then in discussing those impacts as they relate to policies grouped by type noted those impacts which are beneficial; adverse.
2. Page 29, Summary, Policy 3. Water quality should be good enough to support various uses, including shellfish harvesting, without exploiting any one use.	The Plan recommends the current RWQCB beneficial uses, water quality standards and objectives and continued research to identify needed changes and modifications. Recommendations for shellfish harvesting reflect fact that point-source controls have substantially improved water quality but the discrete sources (surface runoff, on-site system failures, oil and chemical spills) continue to impair recreational/commercial Shellfish harvesting. This resource could provide significant amounts of recreational opportunities and be an economic benefit of the entire water quality improvement program. To realize that potential, surveys and pilot projects and research are required. Limited resources effect the ability of Health Departments to do this; the plan policies serve an advocacy function.
3. DEIR, page 8, second paragraph, line 5 - the subcategories are column headings.	Staff notes error; will correct.

Comments

4. DEIR, page 14. Water supply plan could have an impact on surface runoff plan through changes in soil erosion.
5. DEIR, page 36. The section discussing short-term vs. long-term effects is weak. Staff should discuss for example whether Policy 6 puts off time at which really stringent treatment standards are necessary.
6. DEIR, page 51, last paragraph, last 2 sentences. Are the sludge disposal impacts considered due to SWMP, not WQMP?
7. DEIR, page 62. General Policy II could have adverse energy impacts if control is at the expense of fuel economy as it was in the early 70s.
8. The Draft EIR description of the physical environmental setting, especially the biological community, is inadequate. Many species would be beneficially and/or adversely impacted by cleaner air and water, landfill or water storage projects.

Responses

Staff notes comment; will correct.

Staff notes comment; will respond in FEIR.

Increased volumes of sludge generated through wastewater treatment is discussed as an adverse impact of the WQMP on pages 27-28 of the DEIR. Certain of the impacts can be mitigated by a plan for management of sewage solids. The San Francisco Bay Region Wastewater Solids Study is developing a plan for solids management and study results will be reviewed and incorporated into the EMP as a portion of the SWMP. The impacts of sludge processing, transport and disposal will be identified in the DEIR prepared for the facilities plans developed for the four major treatment agencies, and are also discussed in the DEIR, pages 51, 52 and 53, and in various Sludge Study reports.

Staff notes comments.

The Basin Plan for the San Francisco Bay Region provides substantial amounts of information on the ecology of the region. Many EIR/EIS concentrate on inventories and maps rather than impact identification; this DEIR incorporates such documents by reference to allow concentration on impact identification.

Comments

Responses

Response to comments on the DEIR only from the California Council for Environmental and Economic Balance position on Draft EMP for the Bay Area, February 1978.

1. Page 14 of the first section of the position paper comments on the lack of impact analysis of the land use strategies.

Requirements of the Clean Air Act are exempted from NEPA requirements for environmental impact statements. Nevertheless, the EMTF directed ABAG to extend the assessment of environmental, economic and social impacts of actions proposed required under section 208(b)(2)(e) to all aspects of the EMP. Therefore, the plan recommendation tables in Volume I of the EMP summarize those effects (and the institutional and financial effects) for all policies and actions including the land use controls. A more detailed impact assessment is contained in AQMP Tech Memo 15--Assessment/Evaluation Tech. Memo 4, "Assessment of Air Pollution Control Programs," January 1978. The significant environmental effects of recommended policies are identified, as required by CEQA, in the DEIR. The land use measures were subsequently deleted from the EMP. All reference to the significant environmental effects of those measures will be deleted in the FEIR.

Section of CEEB position paper titled "CEEB Suggested Amendments to AQMP Portion of EMP for San Francisco Bay Area and Comments on Draft EIR Under CEQA." The Draft EIR, as required by CEQA, focuses on the significant environmental effects of the proposed policies and actions in the Draft EMP. Only comments that seem directed to the significant environmental effects discussed in the DEIR are responded to and included in the FEIR. Those questions and responses are:

What is the incremental cost and emissions reduction between floating roof, secondary seals and closed systems?

The difference between emission reductions from primary and secondary seals for vapor recovery systems is not significant within the accuracy of the estimates.

Comments

What is the incremental cost and estimated emissions reduction differential between RACT and BACT as applied to the existing stationary sources of hydrocarbon emissions?

How were the estimated emissions reductions attributed to NSR calculated?

Why are transportation control measures emission reductions included with compact development for the year 2000 projection?

What is the estimated emission reduction for transportation control measures 8-15 in 2000?

Responses

The definitions of RACT and BACT are not so substantially different that there is a difference in the emissions reduction attributable to the two phrases.

The emission reductions in 1985 from NSR regulations (BAAPCD Regulation 2, Section 1309) were estimated using best engineering judgement and application of NSR from its adoption in 1972 to the present. Categories of industry potentially impacted by NSR were analyzed from the standpoint of their projected normal growth and the effect of NSR on growth using several assumptions (e.g. less than $\frac{1}{2}\%$ annual growth of heavy industry, a $1\frac{1}{2}\%$ annual growth in particulate and organic emissions based on 1975-76 emissions, a 1% annual growth in energy usage). The assumptions are contained in AQMP Tech Memo 14 "Effectiveness and Costs of Alternative Air Pollution Control Programs", September, 1977 and various other technical reports.

The land use measures in conjunction with transportation controls were felt necessary to reduce auto dependency and the number and length of automobile trips in the region in order to reduce hydrocarbon emissions. The two strategies were interdependent means to achieve a 24 tons/day reduction in hydrocarbon emissions by the year 2000, the amount estimated to assure long term maintenance of the Federal photochemical oxidant standard.

The draft EMP estimated a reduction of 7 tons/day in hydrocarbon emissions in 1985 from transportation controls and 24 tons/day in the year 2000 from transportation and land use measures combined. Hydrocarbon emission reductions in the year 2000 solely from the transportation controls remaining in the EMP after deletion are not estimated.

Comments

Questions, pages 10-13

Responses

These questions are directed at the land use measures in the AQMP portion of the draft EMP. AQMP Tech Memo 15 - Assessment Evaluation Tech Memo 4, "Assessment of Air Pollution Control Programs," January 1978, identified the environmental, institutional, financial, economic and social impacts of the land use measures. The significant environmental effects of the land use measures were discussed in the DEIR. On March 16, 1978 the EMTF deleted land use from the AQMP. That decision was subsequently endorsed by the RPC and Executive Board. Response to these questions is therefore not deemed necessary for the FEIR. The FEIR will likewise delete the discussion of the significant environmental effects of the land use measures.

Letter from California Dept. of Transportation, Div. of Transportation Planning, (February 27, 1978), James B. Borden, Acting Chief, Office of State Planning, and Adrianna Gianturco, Director (February 17, 1978).

1. EIR could be improved by providing an analysis of alternatives, including no build.
2. There is little discussion of changes in lifestyle (if any) that will occur under various alternatives.

The DEIR does discuss alternatives to the proposed action including no action. CEQA does not require extensive discussion in DEIR of the analysis of alternatives.

Only significant environmental effects are addressed in the DEIR. AQMP Tech Memo 15, Assessment/Evaluation Tech Memo 4, "Assessment of Air Pollution Control Programs," discusses environmental, institutional, financial, economic and social impacts of the draft AQMP. These impacts are also summarized in plan recommendation tables in Volume I of EMP.

Comments

Responses

San Jose Chamber of Commerce, January 26, 1978

1. Request ABAG add analysis of job impacts of EMP to the EIR.

The EIR addresses the significant environmental effects of the EMP and its component parts, as required by CEQA. Volume I of the EMP identifies the environmental, institutional, financial, economic and social impacts of the EMP. Employment benefits (jobs created) are noted as well as possible adverse employment effects; during the continuing planning process further analysis of employment effects will continue.

Board of Supervisors of Contra Costa County,
Resolution No. 78/136, February 7, 1978

1. Volume II containing EIR has been available for review only since February 3, 1978; therefore, there was no time for review and comment.

The draft EIR was released on December 31, 1977. The Public Notice of its availability appeared in Contra Costa Times on January 2, 1978. It was received by Contra Costa County Library, Pleasant Hill, on 1/3/78 and Richmond Public Library on 1/3/78, where it was available for public review.

Comments

Responses

California Institute of Public Transportation,
Wilfred W. Russell, Transportation Engineer

1. Statements about air pollution damages on page 61 of DEIR would be more convincing if substantiated by data.

Staff agrees to cite data sources in Final EIR.

Letter from Charles Kinney, Counselor, Associated Building Industry of Northern California

Mr. Kinney's letter claims to be in reference to the Draft EIR for the Draft EMP. Our legal obligations to respond to each question raised merit some delineation. The final paragraph of each section requests a discussion of the environmental, economic and social impacts of the issues raised in that particular section.

"State EIR Guidelines" which implement CEQA define environment as physical conditions in an area (land, air, water, minerals, flora, fauna, ambient noise and objects of historic or aesthetic significance). Significant effect on the environment is defined as "...substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the activity..." The DEIR thus addresses the significant environmental effects of each plan component and of the EMP in its entirety. Volume I of the EMP identifies the environmental, economic and social (also institutional and financial) impacts.

Section 15146(a)(4) of the "State EIR Guidelines" (Contents of Final Environmental Impact Report) states that the FEIR shall consist of "The responses of the Lead Agency to significant environmental points raised in the review and consultation process."

Comments

1. Assess the impacts of preparing AQMP using "out of date" oxidant standard of 0.08 ppm instead of "more reasonable" standard of .15 ppm.
Assess impacts of not changing the standard.

2. Gas rationing has better emission reduction characteristics than land use measures but is rejected as a feasible alternative because of administrative and public acceptability problems.
Assess impacts of not including gas rationing as an AQMP control.

Responses

The questions raised in this letter are not directed to the Draft EIR but to the Draft EMP. CEQA does not require economic and social impact assessment. Requests for economic and social impact assessment in the context of an EIR review are inappropriate under CEQA. Moreover, many of the issues for which Mr. Kinney requests an economic and social impact analysis go far beyond the scope of the EMP and the authority or obligation of this agency to address. Mr. Kinney's letter raises few significant environmental points that are responded to here. Mr. Kinney's letter will be responded to in its entirety and included in Volume III, Summary of Public Comments and Responses.

The current standard is law and the AQMP must show attainment and maintenance of the current standard. If revised, the AQMP can be revised as necessary during the continuing planning process. It is not the responsibility of this agency to assess the impacts of not changing the Federal photochemical oxidant standard. As a Federal standard that can only be changed by the Federal government, a request for such an assessment cannot be required under CEQA.

Gas rationing is included in a fairly extensive list of alternative air pollution controls. AQMP Tech Memo 23 notes reasons for rejecting alternatives as does Table 3 in the DEIR. CEQA does not require in-depth impact assessment of alternatives not selected.

APPENDIX F

WRITTEN COMMENTS AND RESPONSES
ON THE SUPPLEMENT TO THE
DEIR



BAY AREA RAPID TRANSIT DISTRICT
800 Madison Street
Oakland, California 94607
Telephone 465-4100

June 1, 1978

HARVEY W. GLASSER, M.D.

PRESIDENT

NELLO J. BIANCO

VICE PRESIDENT

FRANK C. HERRINGER

GENERAL MANAGER

DIRECTORS

BARCLAY SIMPSON

1ST DISTRICT

NELLO J. BIANCO

2ND DISTRICT

ARTHUR J. SHARTSIS

3RD DISTRICT

HARVEY W. GLASSER, M.D.

4TH DISTRICT

ROBERT S. ALLEN

5TH DISTRICT

JOHN GLENN

6TH DISTRICT

ROSLYN L. BALTIMORE

7TH DISTRICT

EUGENE GARFINKLE

8TH DISTRICT

JOHN H. KIRKWOOD

9TH DISTRICT

Mr. Revan Tranter
Executive Director
Association of Bay Area Governments
Hotel Claremont
Berkeley, CA 94705

Dear Mr. Tranter:

The staff of the Planning Department of the San Francisco Bay Area Rapid Transit District has reviewed the supplement to the Draft Environmental Impact Report of the proposed Environmental Management Plan and would like to offer the following comment.

Page 2 of the supplement describes the substitute air quality maintenance measures selected for inclusion in the Air Quality Maintenance Plan. Number 4 of the measures is to "provide additional transit." While staff concurs in this recommendation, we are concerned as to how this measure will be accomplished.

The supplement does not address the funding source for the additional transit, nor by whom it is to be provided.

While we realize that it is difficult to achieve a high level of detail in such a document, some indication of how additional transit is to be provided appears most appropriate.

Thank you for the opportunity to review the supplement and please be advised that BART staff is willing to cooperate in the development of plans for additional transit to achieve the goals of the Environmental Management Plan.

Sincerely,

Howard L. Goode
Manager, Planning Programs

HLG:sag

RECEIVED

JUN 2 1978

ASSOCIATION OF
BAY AREA GOVERNMENTS

Sunnyvale, Ca.

May 26, 1978

Revan A.F. Tranter, Executive Director

ABAG

Berkeley, Ca.

RECEIVED

MAY 31 1978

ASSOCIATION OF
BAY AREA GOVERNMENTS

Dear Mr. Tranter,

I wish to register my belief that the supplement to the Environmental Management Plan is inadequate to meet State and Federal guidelines under the Clean Air Act of 1970, as amended. Removal of land use and development management actions from the final document seriously compromised its credibility and ability to meet those federal standards. Political feasibility aside, we can expect State and Federal preemption into Bay region planning now that we of the region have shown reluctance to clean our air by making auto use as inconvenient as cancer legions.

I strongly urge reconsideration of the stricken provisions and a burying of the parochial

attitudes which have dominated member city and county participation in A.B.A.C. For our own and our children's health, we must do better than this.

Sincerely,

Craig Herssmeyer

P. S. Please include this in the hearing record,

647 E. Olive Ave. #3
Sunnyvale, Ca. 94086

Letter from Howard L. Goode, Manager, Planning Programs, Bay Area Rapid Transit District, June 1, 1978

The four measures discussed in the Supplement to the DEIR are identified to indicate consideration of the requirement to ensure maintenance of the Federal oxidant standard once achieved. Adoption of one or more of these maintenance measures is recommended between 1985 and 1987 (implementation 1990 or thereafter) to ensure maintenance through the year 2000. The measures are identified for further analysis during the continuing planning process.

The broad-based strategy to meet the standard by 1985-87 will be monitored for its effectiveness. In addition, many conditions affecting the need for these and/or other maintenance measures may change during the next 7-10 years (e.g. standard revisions). During the continuing planning process, these measures will be further specified (e.g. how they would be implemented, funding alternatives) and further analyzed from the standpoint of effectiveness and other impacts.

Letter from Craig Hermsmeyer, Sunnyvale

The Supplement to the Draft EIR is not a supplement to the EMP. The identified maintenance measures should, according to technical analysis, produce a 24 ton/day reduction in hydrocarbon emissions. That amount is the current estimated reduction necessary for long-term maintenance (to the year 2000) of the Federal oxidant standard once the standard is met in 1985-87. The Clean Air Act requires the AQMP to show how the standard will be met and maintained. During the continuing planning process, these identified maintenance measures will be further specified and analyzed together with the effectiveness of the broad-based strategy in meeting the Federal standard and other changing conditions. Based on all of that information, by 1985-87 the necessary maintenance measures will be adopted for implementation. Depending on the air quality improvements and other changing conditions during the next 7-10 years of implementation of the broad-based strategy to meet the Federal standard, some number, all or additional measures may be necessary to ensure maintenance of the standard.

Chapter II

INDEX OF

AGENCY RESPONSIBILITIES

INDEX OF AGENCY RESPONSIBILITIES

ABAG's General Assembly approved an initial Environmental Management Plan for the Bay Area at its General Assembly on June 10, 1978. Now that the plan has been readied for implementation, representatives from all levels of government - cities, counties, and special districts in addition to regional, State and Federal agencies - will want to know what their responsibilities are for carrying out the plan. This chapter is intended to answer such concerns. In it are organized the elements of the plan by implementing agency.

For example, the representative of a given city or county in the Bay Area can look at this chapter and readily determine the following things:

- o Actions that the city or county - or a special district operating within the city or county - will be responsible for specifically.
- o Actions that the city or county - or a special district - will be responsible for that apply generally to local governments in the Bay Area.
- o Actions that a city or county will be involved in as a member of ABAG - in other words, in conjunction and cooperation with other local governments of the region.
- o Actions that will affect the city or county because they are to be implemented by regional, State and/or Federal agencies or legislative bodies.
- o Actions that are applicable to private implementing authorities, such as industrial firms.

The purpose of this chapter is to rearrange the policies and actions of the initial Environmental Management Plan so that governmental and private authorities can gain a clearer picture of their responsibilities for implementing the plan. To serve this purpose, all the information is organized by implementing agency.

It should be noted that this chapter is organized only by implementing agency. Actions are not organized by enforcement agency. The reason for this is that the enforcement agencies often have implementation responsibilities as well, and it would be confusing to lump the two sets of responsibilities. Also, most enforcement actions will be carried out by a relative handful of agencies. The agencies with general enforcement authority are these:

Water Quality Management Plan - San Francisco Bay Regional Water Quality Control Board; State Water Resources Control Board; and United States Environmental Protection Agency.

Water Supply Management Plan - none.

Solid Waste Management Plan - State Solid Waste Management Board; State Department of Health; and United States Environmental Protection Agency.

Air Quality Management Plan - Bay Area Air Pollution Control District; California Air Resources Board; and United States Environmental Protection Agency.

Several other agencies have more limited enforcement responsibilities. For example, the San Francisco Bay Conservation and Development Commission has the authority to issue permits which can affect vessel-related pollution at the region's harbors and marinas. ABAG, as another example, will review Federal grant applications for compliance with the Environmental Management Plan.

The cities and counties of the Bay Area will also be enforcement agencies. By approving the Environmental Management Plan at the ABAG General Assembly, local governments have indicated their willingness to carry out those actions in the plan for which they have implementation responsibility. They will thereby be acting as enforcement agencies.

Any jurisdiction with actions to be carried out by the plan will be interested in establishing priorities. Priorities such as these are not easy to determine. However, schedules for implementation are contained in the plan's tables of policies and actions. If more guidance is needed, ABAG can work with officials of agencies and private industry to figure out more specific implementation priorities. ABAG can provide planning and engineering information to answer the more technical questions such as:

1. How severe is the environmental problem addressed by the action?
2. How effective is the action going to be in solving the problem?
3. How much will implementation cost?
4. Will outside sources of funds be available to pay for implementation?
5. Which agencies will have to be dealt with during the implementation process?
6. What is the threat that outside sanctions might be imposed for failure to comply?

Elected officials will need to make the political judgments, such as acceptability of certain actions to an electorate and the locally approved methods of implementation. By combining the two sets of information, ABAG staff and local representatives should be able to develop implementation priorities quite readily.

ACTIONS APPLICABLE TO SPECIFIC CITIES, COUNTIES AND SPECIAL DISTRICTS

There are two groups of control measures in the Environmental Management Plan that apply to specific cities and counties of the Bay Area. Both are in the Water Quality Management Plan. They are:

- o The 20-year project list of municipal wastewater facilities.
- o The surface runoff portion of the Water Quality Management Plan.

These are discussed below.

In addition to the two groups, there is one individual control measure that would be implemented by specific cities, counties or special districts. It is in the Solid Waste Management Plan. Policy 16 in that plan is that "Facilities planning, design, and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the county solid waste management plans, the Environmental Management Plan (208 plan), and Federal and State requirements." Under this policy, Action 16.1 is to develop Step 1 facilities plans for wastewater solids management based on the regional wastewater solids plan. This study will develop facilities plans for the East Bay Municipal Utility District, the Central Contra Costa Sanitation District, the City and County of San Francisco, and the Cities of San Jose/Santa Clara. Other wastewater agencies will develop their own facilities plans as necessary. The schedule for completion is December 1978 for initial facilities plans. Legal authority is under Section 201 of the Federal Water Pollution Control Act, Public Law 95-217, and the Federal Resource Conservation and Recovery Act. The total cost of this action is \$912,000, none of which is directly attributable to this plan. Financing mechanisms are Federal and State grants and local funds. EPA and SWRCB will ensure implementation.

The 20-Year Project List

The 20-year project list is located at the back of Volume I and in Section J of the "Plan Recommendations" volume. Because of its length, it is not repeated here. Reviewers are referred directly to Volume I or the Plan Recommendations volume.

This list, which is required by Federal law, is intended to implement Policy 5 of the Water Quality Management Plan, which states "Provide facilities needed for municipal sewerage service and water quality protection." Action 5.1 under this policy is to "Expand capacity of existing facilities and provide new facilities for municipal sewage collection, treatment to depend on State and Federal regulations. Existing sewerage service facilities must be expanded to service the needs of growing communities. Needed facilities are shown in the 20 year project list contained in Section J, updated annually." This action is to be implemented by local sewerage agencies, acting under their existing local ordinances and regulations. The plan estimates that all projects together will cost an estimated \$240,000,000 per

per year, financed by Federal and State grants, user charges and assessments. None of this cost, though, is directly attributable to this plan because ongoing programs operating under Federal and State law require construction of these facilities to applicable standards. The San Francisco Bay Regional Water Quality Control Board can impose sanctions for non-compliance.

Specific projects in Section J are listed county by county. Each project is described, the implementing agency is named, and estimated costs are given for facilities planning, development of plans and specifications are project construction.

Implementing agencies include cities, special districts and joint powers agencies. For example, the list for Alameda County includes projects undertaken by the City of Oakland, the East Bay Municipal Utility District (a special district), the East Bay Dischargers Authority (a joint powers agency), and many other sewerage agencies.

The Surface Runoff Plan

The surface runoff portion of the Water Quality Management Plan is also to be implemented by specific cities, counties, and special districts. Policy 8 of the Water Quality Management Plan is to "establish a program of surface runoff controls that emphasize low cost measures to reduce the pollutant load from this source." This policy is to be implemented by means of two actions, one implement the county surface runoff plans (Appendix C volume of the plan), after agencies for this action are the counties acting as lead agencies for local general purpose governments, and perhaps Resource Conservation Districts and other special districts. Legal authority for this action is local ordinances, city and county charters, special district enabling legislation, State Constitution, the Federal Water Pollution Control Act, and the State's Porter-Cologne Act. Total cost per year of this action is undetermined, but at least \$250,000, and all of this is directly attributable to this plan. Action by the Regional Water Quality Control Board can ensure implementation of this action.

Action 8.1 indicates that the county surface runoff plans, developed individually by the Bay Area's counties, contain the specific control measures for surface runoff. In this chapter immediately below, the actions of the county surface runoff plans are restated, organized by county.

The reviewer of the county plans should be cautioned against direct comparison of these plans based on the information found in this chapter. Individual counties used differing definitions and assumptions in the preparation of their products, and this fact means that there is no consistent correlation among them. For example, the cost figures for related actions (e.g. street sweeping actions listed in the various plans) can not be compared directly; nor can they be totaled.

Alameda County

(text same as draft starting on II-4 and ending at the end of Page II-42.)

ACTIONS APPLICABLE TO CITIES, COUNTIES AND SPECIAL DISTRICTS GENERALLY

A large group of the policies and actions in the Environmental Management Plan is to be implemented by local governments generally, including the region's cities, counties and subcounty or subregional special districts. These are grouped below by management plan.

Water Quality Management Plan

1. The third policy in this plan is to Facilitate the re-establishment of recreational and commercial shellfish harvesting in the Bay as allowed by water quality." Under this policy, Action 3.2 calls for the establishment of a systematic program for monitoring and sampling selected shellfish beds for bacterial contamination over at least 12-month period. The action would be implemented by June 1978 by the Regional Water Quality Control Board, the State Department of Health and county health departments it would cost \$200,000, and it would be financed by Federal grants and State funds from shellfish harvesting license fees.

2. The fourth policy in this plan is to "ensure that water pollution facilities or measures effectively protect water quality." Under this policy, Action 4.2 calls for the monitoring of the performance of municipal and industrial wastewater systems in accordance with monitoring requirements. This action would be implemented by sewerage agencies and individual private companies on a continuous basis. Although the cost of this action has not been determined, this cost is not directly attributable to this plan. Financing would be by local and private funds, with Regional Water Quality Control Board review to ensure implementation.

Also under this policy, Action 4.3 is to publish an annual report summarizing the results of dischargers' self-monitoring programs. This would be implemented by the Regional Water Quality Control Board and local agencies on an annual basis. The total cost per year of \$32,000, all of which is directly attributable to this plan, is to be paid for by the State.

3. The ninth policy in this plan is to "provide facilities needed for industrial wastewater treatment and disposal and water quality protection." Under this policy, Action 9.4 is to issue and update permits for industrial discharges to municipal sewer systems. The action is to be implemented by sewerage agencies on a continuous basis, with undetermined costs paid for by user charges. Regional Water Quality Control Board action is the measure to ensure implementation.

4. The tenth policy in this plan is to "reduce sewage pollution from vessels, including houseboats, in the Bay-Delta system" Under this policy, Action 10.1 is to improve monitoring and documentation of vessel waste pollution by conducting periodic bacterial sampling of waters at all areas of small boat congregation and documenting the effectiveness of current programs. The action is to be implemented by the Regional Water Quality Control Board in consultation with county health

departments on a quarterly basis commencing in December, 1978. The annual cost of \$150,000, all of which is directly attributable to this plan, is to be paid for by State and EPA grants.

5. The eleventh policy in this plan is to "improve wastewater disposal practices in unsewered areas." Under this policy, Action 11.1 is to establish minimum regionwide standards for on-site disposal systems. These standards are for the selection, design, evaluation and construction of on-site disposal systems, and they would preclude substandard "interim on-site systems awaiting a "future" sewer. This action is to be implemented by the Regional Water Quality Control Board with assistance from county health departments by December, 1979 and annually thereafter. Its annual cost of \$10,000 is paid for out of State funds, Federal grants, and local funds.

Action 11.1 also calls for the incorporation of new standards into local building codes and ordinances. The standards may vary depending on local conditions but must meet minimum requirements. The responsible agencies for this part of Action 11.1 are city and governments, which are scheduled to act by April, 1980. The item's undetermined cost is paid for out of local funds.

Also under the eleventh policy, Action 11.2 is to inspect periodically new on-site wastewater disposal systems, including septic tanks, and establish procedures to ensure proper maintenance. The inspection will be by public agencies. The action is to be implemented by local agencies by October 1978. Costs are undetermined, and they are paid for by service fees, "201" and State Clean Water grants, and maintenance districts. The Regional Water Quality Control Board can require public management of new developments.

Also under the eleventh policy, Action 11.3 is to establish a procedure for inspection and maintenance of existing on-site systems where appropriate. Public management and procedures for establishment are determined by California Health and Safety Code Section 6950 et seq. The responsible agencies for this action are local governments, who are schedule to act as needed. The undetermined costs for this action are paid for by service fees, "201" and State Clean Water grants, and maintenance districts. The Regional Water Quality Control Board can issue waste discharge permits for on-site systems.

Finally under the eleventh policy, Action 11.4 is to install sewerage systems where on-site systems are inappropriate. A county health department survey identifying problems leads to a Regional Water Quality Control Board cease and desist order and the need for sewers. New developments not meeting updated standards for on-site systems would automatically need sewers. "Inappropriate" means technically unsuitable for permanent use on the proposed or existing lot size. The responsible agencies for this action are local sewerage agencies, acting on an ongoing basis. The costs for the action are undetermined, although sewerage systems are financed via "201" and State Clean Water grants, local bonds, assessments, service charges, property taxes, etc. The Regional Water Quality Control Board cease and desist order is the measure to ensure implementation. The health department can force evacuation of dwellings.

6. The twelfth policy in this plan is to "monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in the Bay Area." Under this policy, Action 12.4 is to develop local roadway and railbed spill containment and cleanup capabilities. Local fire departments would prepare plans for dealing with a variety of spilled chemicals. The action is to be implemented by local fire departments and county Offices of Emergency Services by December 1978. Its undetermined costs are paid for by local funds.

Water Supply Management Plan

1. The second policy in this plan is to "encourage water saving." Under this policy, Action 2.1 is to implement residential water savings programs in existing developments including homes, businesses, industries and recreational areas. These are "moderate" residential water savings programs emphasizing retrofit of water saving devices. 5-10 percent savings can be achieved in this way. The action is to be implemented by water supply agencies, homeowners and private companies by December 1978. The total cost for this action is \$1,420,000, to be paid for by user charges and private funds.

Also under this policy, Action 2.2 is to implement water savings program in new developments, including homes, businesses, industries and recreational areas. "Moderate" water savings programs emphasizing the building-in of devices into new construction are recommended. 10-20 percent savings can be achieved in this way. This action is to be implemented by water supply agencies, developers, private developers and public institutions by December 1978. The total cost for this action is included above under Action 2.1 and is to be paid for by user charges and private funds.

Also under the second policy, Action 2.3 is to revise and update building codes to include water saving devices in new construction. The responsible agencies are cities, counties, and the International Conference of Building Officials, acting on a continuous basis from December 1978. Cost are undetermined, with financing by city and county funds.

Also under this policy, Action 2.6 is to make public as economically as possible data on annual water use and conservation in the region. Implementing agencies for this action are the Water Management Coordinating Committee, water agencies, the State Department of Water Resources, and media, acting on an annual basis. Costs are undetermined.

Also under the second policy, 2.7 is to evaluate changing water rate structures to encourage water saving. This action is to be considered by the Water Management Coordinating Committee and acted on by water agencies by December 1978. Its underdetermined costs are financed by user charges.

Finally under the second policy, Action 2.9 is to establish a program to promote landscaping appropriate to the Bay Area Climate. Plans native to the Bay Area are adapted for survival in the prevailing climate. They do not require large quantities of water. This action might be implemented as part of a regionally coordinated public education/information program. The responsible agencies are the Water Management Coordinating Committee and water agencies, acting by December 1978. Costs are undetermined.

2. The third policy in this plan is to "encourage safe and cost-effective wastewater reclamation." Under this policy, Action 3.2 is to construct cost-effective wastewater reclamation projects. It is implemented by wastewater agencies on a continuous basis. Its cost, none of which is directly attributable to this plan, is \$10,200,000 per year. Financing is by EPA and State grants, user charges and revenues from the sale of water.

Solid Waste Management Plan

1. The first policy in this plan is that "the regional Solid Waste Management Plan should primarily be based on the county Solid Waste Management Plans, coordinated with State planning, and integrated with areawide environmental management planning; primary responsibility for adequate solid waste management shall rest with local governments." Under this policy, Action 1.1 is to carry out and update county plans as the basis of the regional Solid Waste Management Plan. This action is to be implemented by counties, with participation from cities and other local jurisdictions on an ongoing basis. The total cost of this action is \$675,000 per year in public cost, and \$570,000,000 in public and private costs between 1978 and 1980, none of which is directly attributable to this plan. Financing is by State and local funds. The State Solid Waste Management Board may take legal action if plans are not implemented, or shall not approve any request for State or Federal financial assistance for any solid waste management project not in conformance with the approved county plans.

Also under the first policy, Action 1.2 is to coordinate the regional solid waste management plan with State planning and areawide environmental management planning. Incorporate changes in county plans and on-going planning activities of other State, regional, and local agencies, and include more detailed planning for regional issues. Monitor Federal Resource Conservation and Recovery Act regulations and make information available to counties on impacts and opportunities. This action is to be implemented by ABAG with assistance from an intercounty and interagency coordinating committee on an ongoing basis. The annual costs of \$65,000, all of which is directly attributable to this plan, is to be paid for by Federal and State funds as well as ABAG dues. Existing EPA and State Solid Waste Management Board requirements will ensure implementation.

2. The third policy in this plan is that "the regional Solid Waste Management Plan should focus on multi-jurisdictional projects for waste reduction and recovery of materials and energy from solid waste." Under this policy, Action 3.2 is to develop additional information that would lead to construction of a network of new resource recovery facilities through studies and demonstration projects, such as: a) Air quality, water quality, and other environmental effects of large scale energy recovery systems; b) The impasse between overall long-term environmental benefits of waste-to-energy systems and air quality regulations; c) Technical feasibility as well as financial and social impacts of resource recovery projects; d) Size and location of potential markets for the resources that are to be recovered; e) Cost and energy requirements for source separated and mechanically separated materials; and f) Feasibility of cooperative arrangements among community recycling programs for transportation, warehousing, and marketing. This action is to be implemented by EPA and SSWMB in conjunction with cities, counties and ABAG by 1982. Its annual cost of \$996,000, none of which is directly attributable to this plan, is paid for by Federal and State funds, and by State Senate Bill 650 (1977).

3. The fourth policy in this plan is that "all solid waste disposal sites must be situated, designed, operated, and eventually closed down in a proper manner to provide protection to the surface and ground water quality and the natural environment as well as protection of public health and safety." Action 4.2 under this policy is to issue and enforce permits for operation of solid waste and hazardous waste facilities and management planning. This action is to be implemented by SSWMB, city and county enforcement agencies, and State and local health departments on an ongoing basis. Its annual cost of #2,100,000, none of which is directly attributable to this plan, is paid for by State and local general funds. The SSWMB has the legal mandate to issue permits and may take legal action to ensure enforcement.

4. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Under this policy, Action 5.1 is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations, including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies, including local governments, with responsibility for regulating energy recovery facilities); b) Assign a staff member knowledgeable in solid waste management to assist applicant in early identification of permit requirements (this is to be implemented by County Solid Waste Management Agencies); and c) Hold meetings prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by project applicant (this is to be

implemented by County Solid Waste Management Agencies or other permitting agencies, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of County general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

5. The sixth policy in this plan is that "Federal, State and local public education programs are essential to promote awareness of the feasibility and need for waste reduction." Under this policy, Action 6.2 is to provide public information packets and multi-media programs on waste reduction. Introduce classes on waste reduction. This involves describing and illustrating ways to reduce use and increase reuse of materials. SSWMB and ABAG will apply for Federal funds to prepare and distribute throughout the region informational materials - brochures, filmstrips, etc. On ways that individuals can reduce waste and reuse materials in their homes, schools, work and leisure places. Local school districts introduce school classes on waste reduction with assistance provided by SSMB, ABAG, and local governments.

This action is to be implemented by regional and local agencies, including school districts, as delegated by SSWMB, on a continuing basis. Its annual cost of \$202,000 is to be paid for out of the State General Fund via State Senate Bill.

650 (1977).

6. The ninth policy in this plan is that "Federal, State and local governments should adopt legislative and administrative changes to support stable adequate markets for secondary materials and products made from them." Action 9.2 under this policy is to adopt preferential purchasing policies for secondary materials, where appropriate. This is to be implemented by ABAG, regional agencies, and local governments as soon as possible. The annual cost of \$16,000 needs no financing mechanism.

7. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs, where appropriate." Under this policy, Action 10.3 is to establish an office paper recycling program. Data and experience of the public agency programs would be used to expand recycling into the private sector. This action is to be implemented by ABAG and other regional agencies, local governments, and the private sector. The schedule for action is May 1978 for ABAG. Total cost per year is \$3,900, financed by sales of used paper.

Also under the tenth policy, Action 10.4 is to adopt resolutions supporting existing community source separation and recycling programs. These resolutions would acknowledge on-going efforts (such as voluntary

recycling centers, school use of industrial scrap materials, etc.), encourage involvement in these programs, and establish policies supporting new programs. The action is to be implemented by city councils, county boards of supervisors, school districts, and county solid waste management authorities as soon as possible. The total cost of \$10,000 needs no financing mechanism.

8. The eleventh policy in this plan is that "adequate planning for hazardous waste management requires accurate data." Under this policy, Action 11.1 is to conduct surveys of hazardous industrial wastes. The action is to be implemented by the State Department of Health with assistance from counties, SSWMB and ABAG. The schedule for action is 1979. The action's total public cost of \$75,000 and total private cost of \$16,000 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds, including in-kind services. Agreements are to be negotiated between ABAG, State agencies, and the county solid waste management services.

Also under the eleventh policy, Action 11.3 is to determine whether there is a need for additional Class I site capacity in the Bay Area and to determine waste quantities that can be handled at each existing Class I site. The action is to be implemented by the State Health Department conduct surveys of hazardous hospital wastes. The action is to be implemented by the State Department in conjunction with the Regional Water Quality Control Board, SSWMB, ABAG, and the counties on an ongoing basis. The -total cost \$21,000 is paid for by a SSWMB grant. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

9. The twelfth policy in this plan is that "hazardous industrial waste reduction, source separation, and recovery should be promoted in the interest of limiting land disposal." Under this policy, Action 12.1 is to encourage industry to make changes in its processes to reduce the amount of hazardous waste generated. The action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds, and the California Pollution Control Financing Authority. An agreement is to be negotiated between ABAG, State agencies and county solid waste management agencies.

Also under the twelfth policy, Action 12.2 is to encourage hazardous waste source separation by encouraging industry to avoid mixing wastes to facilitate recycling. This action is to be implemented by the State Health Department with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds and State Senate Bill 650 funds. An agreement is to be negotiated between ABAG, State agencies and county solid waste management agencies.

Also under the twelfth policy, Action 12.3 is to encourage hazardous waste resource recovery. This involves providing incentives to industry for resource recovery such as: a) Low interest loans for new equipment (implemented by the State Health Department and SSWMB); b) A Statewide waste exchange and marketing system (implemented by the State Health Department); c) Information dissemination through business associations (implemented by ABAG and the State Health Department); d) Guidance to industry on reusing waste (implemented by the State Health Department); and e) Charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment (implemented by the State Health Department and county solid waste management agencies). All items are ongoing. The total cost per year of this action is \$18,000, which is to be financed by the Federal Resource Conservation and Recovery Act, the California Pollution Control Financing Authority, and State funds. Agreements are to be negotiated between ABAG, the State Health Department, SSWMB, and county solid waste management agencies.

Finally under the twelfth policy, Action 12.4 is to investigate the consolidation of hazardous wastes for processing. This action is to be implemented by the State Health Department with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The total cost of \$30,000 is to be paid for by the Federal Resource Conservation and Recovery Act and by State funds. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

10. The thirteenth policy in this plan is that "regulations should ensure safe and proper handling of hazardous wastes." Action 13.4 under this policy is to improve procedures for preventing and handling spills of hazardous wastes. This involves: a) Evaluating preventive measures for oil and chemical spills on land and recommend improvements as appropriate (implemented by appropriate Federal, State, regional and local agencies); and Providing for training of firefighters in by County Offices of Emergency Services) and c) Designating a single responsible agency for each county for notification and handling of spills, such as the County Office of Emergency Services or the County Health Department (implemented by the county and cities for each county). All items are on an ongoing basis. The total cost of the action is \$14,000, paid for out of Federal, State and local funds.

Also under the thirteenth policy, Action 13.5 is to ensure proper handling of hospital wastes by requiring that infectious or pathological wastes from hospitals be disposed through incineration or processed for disposal to sewers. This action is to be implemented by the State Health Department and local health departments which is to be financed by the Federal Resource Conservation and Recovery Act and by State funds.

Finally under the thirteenth policy, Action 13.6 is to establish and enforce regulations and establish a permit and monitoring system on-site disposal of hazardous waste. This action is to be implemented by the State Health Department, the Bay Area Air Pollution Control District,

RWQCB, and county solid waste management agencies by 1978. The annual cost of \$53,000 is to be financed by the Federal Resource Conservation and Recovery Act, State funds, and disposal fees.

11. The fourteenth policy in this plan is that "future Class I disposal sites and facilities should be located so that they do not have adverse effects on human health and safety, air and water quality, wildlife, critical environmental resources and urbanized areas." Under this policy, Action 14.1 is to develop necessary arrangements that would lead to reservation and acquisition of sites if additional disposal capacity for hazardous wastes is needed (see Action 11.3). Pending the results of Action 11.3, affected counties will be convened to determine areas for further study and develop necessary intergovernmental and public-private arrangements for financing studies, reports, public review and site(s) reservation and/or acquisition. This action is to be implemented by affected local jurisdictions (to be determined), to be assisted by ABAG, SSWMB, and State Department of Health if requested. The item is ongoing. Costs are to be determined, and no financing mechanism is needed at this time (contingent on Action 11.3); Federal and State grants will finance Action 14.1 if it is needed.

12. The fifteenth policy in this plan is that "the regional Wastewater Solids Study recommendations, when completed, should be integrated into local and regional Wastewater Solids Study recommendations into regional and local solid waste management plans. Regional issues identified in the regional wastewater solids management plan shall be addressed in the continuing planning process of the Environmental Management Plan. This action is to be implemented by ABAG in conjunction with the State Water Resources Control Board, the Regional Water Quality Control Board, other designated wastewater management agencies and county solid waste management agencies. The schedule for action is continuous after December 1977. Costs are to be determined, with financing by Federal grants.

13. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the County Solid Waste Management Plans, the Environmental Management Plan (208 plan), and Federal and State requirements. Under this policy, Action 16.3 is to design wastewater solids management facilities (Step 2) according to the approved facilities plans. This action is to be implemented by wastewater management agencies in 1990-80. Its total cost of \$14,800,000, none of which is directly attributable to this plan, is to be paid for out of Federal and State grants and local funds.

Also under the sixteenth policy, Action 16.4 is to construction wastewater solids management facilities (Step 3) according to the approved facilities plans. This action is to be implemented by wastewater management agencies in 1981-82. Its total cost of \$289,000,000, none of which is directly attributable to this plan, is to be paid for out of Federal and State grants and local funds.

Air Quality Management Plan

1. Transportation controls form a group of actions in this plan. The general policy here is to "reduce motor vehicle emissions through transportation actions to reduce vehicle use." Under this policy, Action 7 involves the establishment of preferential parking for carpools and vanpools. The action is to be implemented by cities, counties, employers, and the Metropolitan Transportation Commission. It is to be adopted by 1978, fully implemented by 1985, and is to cost \$886,000.

Also in this group of actions, Action 8 is to pursue a three-fold transit improvement strategy: (1) MTC, in cooperation with transit operators, will adopt service improvement objective which can be financed by the existing commitment of resources to transit. Improved capacity, service, and ridership are contemplated. A measure of the improvement expected should be agreed to and committed to in the context of the Regional Transportation Plan by October 1, 1978. (2) MTC will continue its efforts to identify the need for additional services (as it has, for example, in the elderly and handicapped program and more recently in the Minority Transportation Needs Assessment Project (MTNAP) and to pursue providing additional services as they are justified. A measure of the improvement expected will continue to be developed as these special needs are examined and as the demand for transit services expands generally. (3) During the commute hours, all major transit systems in the Bay Area are at capacity. Any substantial increase in ridership will be dependent upon increased Federal or State financial assistance. The amount of ridership increase is directly affected by the amount of increased State and Federal funding. Provision of additional transit capacity represents a positive transportation strategy. Thus the State and Federal governments are encouraged to provide necessary funding support for transit improvements to offset any air quality deficiencies caused by deleting less desirable transportation control measures. Without this financial support, transit capacity cannot be significantly expanded. This action is to be implemented by MTC and transit districts (e.g. Muni, AC, BART). It is to be adopted in 1978 and fully implemented by 1985 at a total cost of \$32.2 million. Financing mechanisms are Federal Mass Transportation Assistance Programs, fare revenues, Local Transportation Development Act funds, and State Highway Trust Fund diversions.

Also under this group, Action 11 is to develop more extensive and safe bicycle systems and storage facilities. Objectives need to be developed and monitored to gauge the desirable rate of expansion. Implementing agencies are cities, counties, MTC, and Caltrans. The action is to be adopted by 1980 and fully implemented by 1985. Its cost of \$438,000 is to be paid for out of Federal Aid Highway Programs and Local Transportation Development Act funds.

2. The last portion of this plan is titled "Other Measures." The general policy here is to "ensure maintenance of the oxidant standard beyond 1985-87." Under this policy, Action 13 is to adopt, between 1985 and 1987, and implement in 1990 or thereafter, one or more of the following measures to ensure maintenance of the oxidant standard through the year 2000, subject to further evaluation of the measures during the continuing planning process: a) Reduce hydrocarbon emissions from off-highway mobile sources; c) Implement more stringent vehicle exhaust emission controls - approximately 60-80 percent reduction below 1977 prescribed levels; and d) Provide additional transit. Implementing agencies are the California Air Resources Board, the Bay Area Air Pollution Control District, ABAG, MTC, and transit operators. Adoption of the action is scheduled for 1985-87 and full implementation by 1990-95. Costs and financing are to be determined.

Plan Implementation

1. The second policy for Plan Implementation is that "Federal and State governments should make legislative and administrative changes to carry out Environmental Management Plan recommendations, as necessary." Action 2.12 under this policy is to provide necessary funding for local government agencies to carry out regulations and programs outlined in this Plan. This recommendation supports the capacity of local government to carry on the Environmental Management Plan. This action is to be implemented by the California Legislature, U.S. Congress, and local government based on future income sources. Implementation is scheduled on an as needed basis. Costs of the item are not applicable. Financing mechanisms are Federal and State budgets and local taxing authority and fee setting or assessment ability.

2. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including local governments, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Action 1.6 under this policy is to maintain appropriate technical advisory committees. They would meet as needed during the continuing planning process. The action is to be implemented by ABAG, county lead agencies, and other committee participants on an ongoing basis. Its minor administrative cost will be paid for by Federal and State grants with local matched if required.

Also under the first policy, Action 1.8 is to continue a broad-based public participation program during the continuing planning process. Special efforts would be made to involve low-income, minority and age-category groups in the program. Adequate time would be allowed for public review and comment to plan amendments and the annual plan update. This action is to be implemented by ABAG and other participating agencies, including local governments, on an ongoing basis. The total cost per year is \$250,000, financed by Federal and State grants with local match if required.

2. The third policy for the Continuing Planning Process is that "regional water quality management planning should be continued." Action 3.3. under this policy is to update the water quality element of the Environmental Management Plan. This includes the 20-year project list and the county surface runoff plans. The action is to be implemented by ABAG, the Regional Water Quality Control Board, and county lead agencies annually from 1979. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

3. The sixth policy for the Continuing Planning Process is that "regional air quality planning should be continued." Action 6.1 under this policy is to update the initial air quality plan to cover other pollutants, including but not limited to sulfur dioxide, carbon monoxide, and particulate matter. This covers the other pollutants where potentially serious air quality problems exist in the region. The action is to be implemented by ABAG, the Bay Area Air Pollution Control District, MTC, the Air Resources Board, Caltrans, cities and counties by October 1978. Its undetermined cost will be paid for by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.2 is to review programs made to implement actions to reduce hydrocarbon emissions and determine if reasonable further progress is being made between 1979 and 1982 toward attainment of the Federal oxidant standard. Implementing agencies for this action are ABAG, BAAAPCD, MTC, ARB, Caltrans, cities and counties. Action is scheduled for 1979 and annually thereafter. The undetermined costs are to be financed by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.3 is to establish a regional industrial siting program for analyzing alternative sites, sizes, production processes and environmental control techniques. This is required by the Clean Air Act Amendments of 1977 if the region cannot attain the Federal oxidant standard by 1982 and is to be granted an extension to 1987. The action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAAPCD, MTC, ARB, Caltrans, cities and counties by 1979. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

Finally under the sixth policy, Action 6.4 is to evaluate and propose procedures other than case-by-case offset for permitting industrial growth, with consideration given to any potential competitive advantages or disadvantages to the region that could result from implementation of such procedures. The action is to be implemented by ABAG, BAAAPCD, ARB, cities and counties by 1979 and annually thereafter. Its undetermined cost is to be financed by Federal and State grants with local match if required.

4. The seventh policy for the Continuing Planning Process is that "continued planning requires the completion of tasks that are integrative among the several management plans." Action 7.4 under this policy is to examine and develop recommendations for resolving conflicts between energy generation facilities and air quality standards. The action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAAPCD, county solid waste management agencies, and energy project proponents by 1979. Its undetermined costs are to be financed by Federal and State grants with local match if required.

ACTIONS APPLICABLE TO ABAG

City and county constituents of ABAG will want to know which of the plan's policies and actions are to be implemented by ABAG. These control measures are grouped below by management plan, followed by the pertinent policies and actions in the Plan Implementation and the Continuing Planning Process groups.

Water Quality Management Plan

1. The first policy in this plan is to "improve understanding of Bay-Delta estuarine system and the fate and effects of pollutants entering it." Action 1.5 under this policy is to integrate water quality data with existing regionwide data management system. This action is to be implemented by the Regional Water Quality Control Board in cooperation with ABAG. It is to be started by December 1978. The total cost per year is \$19,000, financed by State and EPA grants.
2. The sixth policy in this plan is to "encourage consolidation of treatment facilities and discharge of wastewater to well-mixed receiving waters where economically justified and environmentally desirable." Action 6.1 under this policy is to review all proposed facilities for consistency with the above policy. It is to be implemented by the State Water Resources Control Board, RWQCB, the Bay Area 208 agency, and ABAG in an A-95 advisory capacity on a continuous basis. Its annual cost of \$4,000 is to be paid for by State appropriation and EPA grants.
3. The eighth policy in this plan is to "establish a program of surface runoff controls that emphasize low cost measures to reduce the pollutant load from this source." Action 8.2 under this policy is to conduct regional aspects of surface runoff programs. Regional aspects include modeling of effects on the Bay-Delta, public education, model ordinances, and assistance on determination of management practices. The action is to be implemented by ABAG/RWQCB on a continuous basis. The costs are to be determined, with financing by Federal 208 funds and/or State program funds.
4. The twelfth policy in this plan is to "monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in Bay Area." Action 12.2 under this policy is to monitor the implementation of new hazardous substances regulations. This is to be implemented by ABAG by October 1978. Total cost of \$5,000 is to be financed by Federal "208" funds.

Also under the twelfth policy, Action 12.3 is to investigate cleanup and preventive measures for inland spills of all potentially hazardous or toxic chemicals in the Bay Area and make recommendations for improvement. This is a one time study of inland spill prevention and cleanup

activities and responsibilities. Further action will depend on the results of this study. The action is to be implemented by an independent consultant hired by ABAG. It is scheduled for October 1979. The cost is \$80,000 for a one-year effort, financed by Federal 208 funds.

Water Supply Management Plan

None of the policies and actions in this plan will be implemented directly by ABAG.

Solid Waste Management Plan

1. The first policy in this plan is that "the regional Solid Waste Management Plan should primarily be based on the county solid waste management plans, coordinated with State planning, and integrated with areawide environmental management planning; primary responsibility for adequate solid waste management shall rest with local governments." Action 1.2 under this policy is to coordinate the regional solid waste management plan with State planning and areawide environmental management planning. Incorporate changes in county plans and on-going planning activities of other State, regional, and local agencies, include more detailed planning for regional issues. Monitor the Federal Resource Conservation and Recovery Act regulations and make information available to counties on impacts and opportunities. This action is to be implemented by ABAG with assistance from an intercounty and interagency coordinating committee on an ongoing basis. Its total annual cost of \$65,000 is to be financed by Federal and State funds and ABAG dues.

2. The third policy in the Solid Waste Management Plan is that "the regional Solid Waste Management Plan should focus on multi-jurisdictional projects for waste reduction and recovery of materials and energy from solid waste." Action 3.1 under this policy is to review proposed resource recovery projects including large-scale waste combustion projects to ensure consistency with county and regional solid waste management and other environmental goals and standards. The action is to be implemented by EPA, the State Solid Waste Management Board, ABAG, and the State Clearinghouse on an ongoing basis. The total annual cost is \$6,000, paid for by Federal and State funds and ABAG dues.

Also under the third policy, Action 3.2 is to develop additional information that would lead to construction of a network of new resource recovery facilities through studies and demonstration projects, such as: a) Air quality, water quality, and other environmental effects of large scale energy recovery systems; b) The impasse between overall long-term environmental benefits of waste-to-energy systems and air

quality regulations; c) Technical feasibility as well as financial and social impacts of resource recovery projects; d) Size and location of potential markets for the resources that are to be recovered; e) Cost and energy requirements for source separated and mechanically separated materials; and f) Feasibility of cooperative arrangements among community recycling programs for transportation, warehousing, and marketing. The action is to be implemented by EPA, SSWMB in conjunction with cities, counties, and ABAG, by 1982. The total cost is \$11,300,000, none of which is directly attributable to this plan, and is to be paid for by Federal and State funds, and by State Senate Bill 650 (1977).

3. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations, including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies with responsibility for regulating energy recovery facilities) b) Assign a staff member knowledgeable in solid waste management to assist applicant in early identification of permit requirements (this is to be implemented by county solid waste management agencies) and c) Hold meeting prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by project applicant (this is to be implemented by county solid waste management agencies or other permitting agencies, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of county general funds, fees and surcharges, and regulatory agencies' operating funds. One general agreement to cover all aspects of the improved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

Also under this plan, Action 5.2 is to collect and make available information on existing permit procedures and on other permit coordination efforts. ABAG will compile information including application forms from each regulatory and commenting agency and distribute to the county solid waste management agencies. ABAG will maintain contact with other agencies (OPR, Resource Agency, ABAG-OPR industrial siting, AB-884, local governments) developing permit streamlining procedures and advocate appropriate legislative changes. This action is to be implemented by ABAG on an ongoing basis. The total annual cost of \$4,500 is to be paid for out of ABAG dues. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

4. The seventh policy in this plan is that "Federal, State and local governments should adopt legislative and administrative changes which promote waste reduction, where appropriate." Action 7.2 under this policy is to advocate Federal and State legislation to promote waste reduction, where appropriate. This involves monitoring proposed legislation, preparing analyses and advocating positions, developing proposals, and seeking legislative sponsors. It is to be implemented by ABAG on a continuing basis. The total annual cost of \$900 is to be financed by State and Federal funds.

5. The eighth policy in this plan is to "facilitate regionwide cooperation in developing stable, adequate markets for secondary materials." Action 8.1 under this policy is to prepare and update a listing of buyers of secondary materials which would include estimates, quantities, quality, and specifications on materials handled. The action is to be implemented by SSWMB in cooperation with ABAG and on a continuing basis. The total annual cost of \$500 is to be paid for out of State and Federal funds.

Also under this policy, Action 8.2 is to provide a forum for coordination. This involves organizing meetings for representatives of recycling centers, local governments, citizens groups, secondary markets, and private enterprise. If appropriate, it also involves assisting in establishing a regional information center on recycling of residential, commercial and industrial wastes. The action is to be implemented by SSWMB in cooperation with ABAG and on an ongoing basis. Its total annual cost of \$1,600 is to be financed by State and Federal funds.

6. The ninth policy in this plan is that "Federal, State and local governments should adopt legislative and administrative changes to support stable, adequate markets for secondary materials and products made from them." Action 9.2 under this policy is to adopt preferential purchasing policies for products containing secondary materials, where appropriate. The action is to be implemented by ABAG, regional agencies and local governments as soon as possible. The total cost is \$190,000, with no financing mechanism needed.

7. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs, where appropriate." Action 10.1 under this policy is to provide information and assistance on source separation. It involves facilitating efforts of local governments, citizen groups, and collection companies by offering technical advice, contacting secondary material buyers, and by providing a forum for coordination of these efforts. It also involves providing information regarding available sources of funding for source separation programs. The action is to be implemented by ABAG in cooperation with SSWMB on an ongoing basis. The total cost per year is \$7,800, financed by ABAG dues, State and Federal grants, and State general funds.

Also under this policy, Action 10.3 is to establish office paper recycling programs. Data and experience of the public agency programs would be used to expand recycling into the private sector. This action is to be implemented by ABAG and other regional agencies, local governments and the private sector. The schedule for action is May 1978 for ABAG. The total cost of \$45,000 is to be financed by sales of used paper.

8. The eleventh policy in this plan is that "adequate planning for hazardous waste management requires accurate data." Action 11.1 under this policy is to conduct surveys of hazardous industrial wastes. The action is to be implemented by the State Department of Health with assistance from counties, SSWMB and ABAG. The schedule for action is 1979. The action's total public cost of \$75,000 and total private cost of \$16,000 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds, including in-kind services. Agreements are to be negotiated between ABAG, State agencies, and the county solid waste management agencies.

Also under the eleventh policy, Action 11.2 is to conduct surveys of hazardous hospital wastes. The action is to be implemented by the State Department of Health with assistance from counties, SSWMB and ABAG by April 1980. The action's total public cost of \$4,900 and total private cost of \$900 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds including in-kind services. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

Finally under the eleventh policy, Action 11.3 is to determine whether there is a need for additional Class I site capacity in the Bay Area and to determine waste quantities that can be handled at each existing Class I site. The action is to be implemented by the State Health Department in conjunction with the Regional Water Quality Control Board, SSWMB, ABAG, and the counties on an ongoing basis. The total cost of \$21,000 is paid for by a SSWMB grant. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

9. The twelfth policy in this plan is that "hazardous industrial waste reduction, source separation, and recovery should be promoted in the interest of limiting land disposal." Under this policy, Action 12.1 is to encourage industry to make changes in its processes to reduce the amount of hazardous waste generated. The action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds, and the California Pollution Control Financing Authority. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

Also under the twelfth policy, Action 12.2 is to encourage hazardous waste source separation by encouraging industry to avoid mixing wastes to facilitate recycling. This action is to be implemented by the State Health Department with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds and State Senate Bill 650 funds. An agreement is to be negotiated between ABAG, State agencies and county solid waste management agencies.

Also under the twelfth policy, Action 12.3 is to encourage hazardous waste resource recovery. This involves providing incentives to industry for resource recovery such as: a) Low interest loans for new equipment (implemented by the State Health Department and SSWMB); b) A Statewide waste exchange and marketing system (implemented by the State Health Department); c) Information dissemination through business associations (implemented by ABAG and the State Health Department); d) Guidance to industry on reusing waste (implemented by the State Health Department); and e) Charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment (implemented by the State Health Department and county solid waste management agencies). All items are ongoing. The total cost per year of this action is \$18,000, which is to be financed by the Federal Resource Conservation and Recovery Act, the California Pollution Control Financing Authority, and State funds. Agreements are to be negotiated between ABAG, the State Health Department, SSWMB, and county solid waste management agencies.

Finally under the twelfth policy, Action 12.4 is to investigate the consolidation of hazardous wastes for processing. This action is to be implemented by the State Health Department with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The total cost of \$30,000 is to be paid for by the Federal Resource Conservation and Recovery Act and by State funds. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

10. The fourteenth policy in this plan is that "future Class I disposal sites and facilities should be located so that they do not have adverse effects on human health and safety, air and water quality, wildlife, critical environmental resources and urbanized areas." Under this policy, Action 14.1 is to develop necessary arrangements that would lead to reservation and acquisition of sites if additional disposal capacity for hazardous wastes is needed (see Action 11.3). Pending the results of Action 11.3, affected counties will be convened to determine areas for further study and develop necessary intergovernmental and public-private arrangements for financing studies, reports, public review and site(s) reservation

and/or acquisition. This action is to be implemented by affected local jurisdictions (to be determined), to be assisted by ABAG, SSWMB, and State Department of Health if requested. The item is ongoing. Costs are to be determined, and no financing mechanism is needed at this time (contingent on Action 11.3); Federal and State grants will finance Action 14.1 if it is needed.

12. The fifteenth policy in this plan is that "the regional Wastewater Solids Study recommendations, when completed, should be integrated into local and regional solid waste management plans." Under this policy, Action 15.2 is to integrate the Wastewater Solids Study recommendations into regional and local solid waste management plans. Regional issues identified in the regional wastewater solids management plans shall be addressed in the continuing planning process of the Environmental Management Plan. This action is to be implemented by ABAG in conjunction with the State Water Resources Control Board, the Regional Water Quality Control Board, other designated wastewater management agencies and county solid waste management agencies. The schedule for action is continuous after December 1977. Costs are to be determined, with financing by Federal grants.

13. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the County Solid Waste Management Plans, the Environmental Management Plan (208 plan), and Federal and State requirements. Under this policy, Action 16.2 is to review proposed facilities plans and approve those that are consistent with the regional solid waste management plan and the 20-year project list in the 208 plan. This action is to be implemented by EPA, the State Water Resources Control Board, RWQCB, the State Health Department, ABAG, and the State Clearinghouse by 1979. The total annual cost of the action, none of which is directly attributable to this plan, is \$4,000, with financing by Federal and State grants, and local and State general funds.

Air Quality Management Plan

1. The last portion of this plan is titled "Other Measures." The general policy here is to "ensure maintenance of the oxidant standard beyond 1985-87." Under this policy, Action 13 is to adopt between 1985 and 1987, and implement in 1990 or thereafter, one or more of the following measures to ensure maintenance of the oxidant standard through the year 2000, subject to further evaluation of the measures during the continuing planning process: a) Reduce hydrocarbon emissions from small gasoline engines; b) Reduce hydrocarbon emissions from off-highway mobile sources; c) Implement more stringent vehicle exhaust emission controls - approximately transit. Implementing agencies are the California Air Resources Board, the Bay Area Air Pollution Control District, ABAG, MTC, and transit operators. Adoption of the action is scheduled for 1985-87 and full implementation by 1990-95. Costs and financing are to be determined.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.1 is to designate ABAG as the lead agency for the Federally required continuing planning and coordinating agency. The implementing agencies for this action are ABAG, State agencies and EPA, and the schedule for action is 1978. The total cost is 0.

Also under the first policy, Action 1.2 is to establish the required policy advisory body to manage the continuing planning process. Its size and composition would be determined by the Executive Board. This is to be implemented by ABAG and is to last for a period up to two years from the present. The total yearly cost is \$30,000, financed by Federal and State grants with local match if required.

Also under this policy, Action 1.3 is to continue joint staff arrangements for air quality planning. This is to be implemented by ABAG, BAAPCD, MTC, ARB, Caltrans, and EPA through an ongoing memorandum of understanding. It has no cost.

Also under the first policy, Action 1.4 is to execute a Memorandum of Understanding to integrate Bay Area water quality planning, including the establishment of a joint water quality planning staff similar to that for air quality planning. This staff would be drawn from ABAG and the Regional Water Quality Control Board. The action is to be implemented by ABAG and the San Francisco Bay Regional Water Quality Control Board in 1978. Its minor administrative cost would be covered by Federal and State grants with local match if required.

Also under this policy, Action 1.5 is to execute a Memorandum of Understanding between ABAG and the State Water Resources Control Board. This memorandum would integrate ABAG's grant review function under Circular A-95 with the SWRCB's decision-making responsibilities for 201 wastewater facilities projects. The action is to be implemented by ABAG and the State Water Resources Control Board in 1978. Its minor administrative cost is financed by Federal and State grants with local match if required.

Also under this policy, Action 1.6 is to maintain appropriate technical advisory committees. They would meet as needed during the continuing planning process. This action is to be implemented by ABAG, county lead agencies and other committee participants on an ongoing basis. Its minor administrative cost is paid for by Federal and State grants with local match if required.

Also under this policy, Action 1.8 is to continue a broad-based public participations program during the continuing planning process. Special efforts would be made to involve low-income, minority and age-category groups in the program. Adequate time would be allowed for public review and comment to plan amendments and the annual plan update. This action is to be implemented by ABAG and other participating agencies on an ongoing basis. The total yearly cost of \$150,000 will be paid for by Federal and State grants with local match if required.

Finally under the first policy, Action 1.9 is to update the Environmental Management Task Force Procedures Manual to guide the continuing planning process for environmental management planning. This action is to be implemented by ABAG in 1978. Its minor administrative cost will be paid for by Federal and State grants with local match if required.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.1 under this policy is to include in the annual update adopted by the General Assembly the following items: a) A summary of benefits, costs and progress of plan implementation during the preceding year; b) Changes recommended as a result of environmental management actions taken during the preceding year, if necessary; c) Revisions that may be appropriate if Federal or State environmental quality standards are changed or if unanticipated technological advances occur; d) New policies and actions, including governmental and financial recommendations for implementation as well as an assessment of their economic, social and environmental impacts; e) Recommend response to changes by State, Federal and implementing agencies; f) Formal action on conditions adopted by State or Federal agencies

when approving the preceding year's updated plan. The action is to be implemented by ABAG on a yearly basis starting in 1979. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

Also under the second policy 2.2 is to include in the Continuing Planning Process an annual status report to the General Assembly from EPA, appropriate State agencies and ABAG on compliance with all applicable Federal and State, air quality, water quality and solid waste standards and regulations in metropolitan areas of California and the nation. If it is demonstrated that Federal, State and local governments are not taking all reasonable steps to ensure equitable administration and enforcement of such standards and regulations, ABAG staff shall make recommendations to the Executive Board and General Assembly for modifying control measures of the Environmental Management Plan. This action is to be implemented by ABAG on yearly basis starting in 1979. Its undetermined costs will be covered by Federal and State grants with local match if required.

3. The third policy for the Continuing Planning Process is that "regional water quality planning should be continued." Action 3.1 under this policy is to reaffirm water quality objectives for waters of the region. Incorporate the presently adopted objectives for the waters of the region concurrent with approval of the Environmental Management Plan. Water quality objectives designed to protect beneficial uses are the foundation of the water quality management plan. Adequate water quality standards must be established and maintained. Beneficial use designations and water quality objectives for the region as adopted by SWRCB and RWQCB are shown in that plan. The objectives are identical to current objectives. All water projects in that plan. The objectives are identical to current objectives. All water projects proposed within the Bay-Delta system should require proof of nondetrimental impact on water quality. this action is to be implemented by ABAG in 1978. It has no cost.

Also under this policy, Action 3.3 is to update the water quality element of the Environmental Management Plan. This includes the 20-year project list and the county surface runoff plans. The action is to be implemented by ABAG, RWQCB, and the county lead agencies on an annual basis from 1979. Its undetermined cost will be paid for by Federal and State grants with local match if required.

4. The fifth policy for the Continuing Planning Process is that "continued planning, as required by Federal and State Law, will be necessary for solid waste management plan, including municipal wastes, hazardous waste and wastewater solids, incorporating results of ongoing planning activities of other state, regional issues.

This action is to be implemented by ABAG in 1979 and annually (they are not estimated separately for this action), with financing by Federal and State grants with local match if required.

5. The sixth policy for the Continuing Planning Process is that "regional air quality planning should be continued." Action 6.1 under this policy is to update the initial air quality plan to cover other pollutants, including but not limited to sulfur dioxide, carbon monoxide, and particulate matter. This covers the other pollutants where potentially serious air quality problems exist in the region. The action is to be implemented by ABAG, the Bay Area Air Pollution Control District, MTC, the Air Resources Board, Caltrans, cities and counties by October 1978. Its undetermined cost will be paid for by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.1 is to review programs made to implement actions to reduce hydrocarbon emissions and determine if reasonable further progress is being made between 1979 and 1982 toward attainment of the Federal oxidant standard. Implementing agencies for this action are ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties. Action is scheduled for 1979 and annually thereafter. The undetermined costs are to be financed by Federal and State grants with local match if required.

Also under this policy, Action 6.3 is to establish a regional industrial siting program for analyzing alternative sites, sizes, production processes and environmental control techniques. This is required by the Clean Air Act Amendments of 1977 if the region cannot attain the Federal oxidant standard by 1982 and is to be granted an extension to 1987. The action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAPCD, MTC, ARB, Caltrans, cities and counties by 1979. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

Finally under this policy, Action 6.4 is to evaluate and propose procedures other than case-by-case offset for permitting industrial growth, with consideration given to any potential competitive advantages or disadvantages to the region that could result from implementation of such procedures. The action is to be implemented by ABAG, BAAPCD, ARB, cities and counties by 1979 and annually thereafter. Its undetermined cost is to be financed by Federal and State grants with local match if required.

6. The seventh policy for the Continuing Planning Process is that "continued planning requires the completion of tasks that are integrative among the several are defined and updated, to conduct a continuing assessment of their social, economic and environmental effects, and develop mitigation measures as appropriate. This action

is to be implemented by ABAG on a continuous basis after approval of the initial plan. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

Also under this policy, Action 7.2 is to develop and propose governmental and financing mechanisms for planning and implementation beyond the first two years following plan approval. This action is to be implemented by ABAG (legislation and Governmental Organization Committee to have lead responsibility) by June 1979. Its undetermined cost is to be paid for by Federal and State grants with local match if required.

Also under the seventh policy, Action 7.3 is to ensure consistency among the management plan elements. This action is to be implemented by ABAG on a continuous basis after approval of the initial plan. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

Finally under the seventh policy, Action 7.4 is to examine and develop recommendations for resolving conflicts between energy generation facilities and air quality standards. This action is to be implemented by ABAG (with Regional Planning Committee involvement) in 1979. Its undetermined costs are financed by Federal and State grants with local match if required.

7. The eighth policy for the Continuing Planning Process is that "adequate and consistent sources of funds must be made available to finance the continuing planning process, including annual plan update." Action 8.1 under this policy is to give high priority attention to the following sources for financing the continuing planning process: 1) continued funding under the Federal Water Pollution Control Act; 2) funding under the Clean Air Act Amendments of 1977; and 3) funding under the Resource Conservation and Recovery Act of 1976. This action is to be implemented by ABAG (Finance and Personnel Committee to have lead responsibility) on an ongoing basis. It is without cost.

Also under the eighth policy, Action 8.2 is that for the period up to two years following approval of the initial plan, to use local sources, including local dues to ABAG, primarily to provide the required matching funds for Federal and/or State planning assistance. This action is to be implemented by ABAG on ongoing basis. It is without cost.

Finally under the eighth policy, Action 8.3 is to develop and recommend a long-term program for financing environmental planning and coordination beyond the initial two-year period using a combination of local, State and Federal funds. The action is to be implemented by ABAG (Finance and Personnel Committee to have lead responsibility) by March 1979. Its undetermined cost is to be paid for by Federal and State grants with local match if required.

ACTIONS APPLICABLE TO REGIONAL AGENCIES OTHER THAN ABAG

Many regional agencies are designated to implement the Environmental Management Plan. ABAG's actions were described in the previous section. This section describes actions applicable to other regional agencies and regionally-sponsored committees:

- o San Francisco Bay Regional Water Quality Control Board (RWQCB), including the San Francisco Bay Delta Research Advisory Council - Water Quality Management Plan, Solid Waste Plan, Plan Implementation, Continuing Planning Process.
- o Water Management Coordinating Committee - Water Supply Management Plan.
- o Bay Area Air Pollution Control District (BAAAPCD) - Solid Waste Management Plan, Air Quality Management Plan, Plan Implementation, Continuing Planning Process.
- o Metropolitan Transportation Commission (MTC) - Solid Waste Management Plan, Air Quality Management Plan, Plan Implementation, Continuing Planning Process.
- o San Francisco Bay Region Wastewater Solids Study - Solid Waste Management Plan.
- o Bay Area Rapid Transit District (BARTD) - Air Quality Management Plan, Plan Implementation.

Agency representatives need consult only those entries under the listing of their agency below.

SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

Water Quality Management Plan

1. The first policy in this plan is to "improve understanding of Bay-Delta estuarine system and the fate and effects of pollutants entering it." Action 1.1 under this policy is to establish the San Francisco Bay Delta Research Advisory Council. Further definition of pollution cause and effect relationships is needed as a basis for developing better standards for protection of water quality. The Council will include representatives from the Regional Water Quality Control Board, the State Water Resources Control Board, ABAG, BCDC and Delta Advisory Council, county surface runoff lead agencies, discharging agencies, agencies involved in water quality research and experts in the various aspects of water quality research and monitoring and public and private interest groups. Staff support for the council will be provided by RWQCB and SWRCB. This action is to be implemented by RWQCB by August 1978. Total annual cost is \$30,000.

Also under the first policy, Action 1.2 is to conduct receiving water monitoring program for San Francisco Bay. This two-year program will be designed by the San Francisco Bay Delta Research Advisory Council under the direction of SWRCB and RWQCB. The results of the program will be used to shape dischargers monitoring requirements including pretreatment in the future. The program should evaluate the need for a permanent centralized monitoring and research organization after fully exploring coordination of laboratory and field work presently performed by dischargers. This action is to be implemented by RWQCB/SWRCB/San Francisco Bay Delta Research Advisory Council by June 1978. Total cost per year is \$1,000,000 for each of 2 years, none of which is directly attributable to this plan. Financing is by Federal "201" funds, State and local funds.

Also under this policy, Action 1.3 is to evaluate and establish research goals. This action is to be implemented by SWRCB and RWQCB advised by SFBDRAC in December, 1979 and annually thereafter. Total in December, 1979 and annually thereafter. Total cost per year is \$15,000, financed by Federal "208" or State program funds.

Also under the first policy, Action 1.4 is to disseminate through the media and other sources an annual "State of the Waters" report, a summary of the current state of bay and delta waters. This action is to be implemented by RWQCB advised by SFBDRAC in August 1979 and annually thereafter. Its annual cost of \$20,000 is paid for out of State program funds.

Finally under the first policy, Action 1.5 is to integrate water quality data with the existing regionwide data management system. This is to be implemented by RWQCB in cooperation with ABAG and started by December 1978. The total cost per year is \$19,000, financed by State and EPA grants.

2. The third policy in this plan is to "facilitate the re-establishment of recreational and commercial shellfish harvesting in the Bay as allowed by water quality." Billions of dollars have already been committed for improvements to sewage and industrial waste disposal systems to meet State and Federal requirements. Relatively modest additional expenditures on administrative and regulatory actions could re-establish recreational and commercial shellfishing. Action 3.1 under this policy is to conduct a preliminary survey and assessment of shellfish beds in the Bay. Major shellfish beds suitable for recreational harvesting would be identified and assessed. The types and sources of contaminants affecting these beds would also be identified. This action is to be implemented by RWQCB, the State Department of Health and the State Department of Fish and Game. The schedule for action is February 1978. Total annual cost of \$50,000 is to be paid for by EQP and/or State grants.

Also under the third policy, Action 3.2 is to establish a systematic monitoring and sampling program of selected shellfish beds. Based on the findings of Action 3.1, a selected number of shellfish beds would be monitored and sampled for bacterial contamination over at least a 12-month period. This action is to be implemented by RWQCB, the State Department of Health, and county health departments by June 1978. Total yearly cost of \$200,000 is to be financed by Federal grants and State funds from shellfish harvesting license fees.

3. The fourth policy in this plan is to "ensure that water pollution facilities or measures effectively protect water quality." Action 4.1 under this policy is to issue and update monitoring requirements appropriate to permit conditions and in conformance with regionwide monitoring network. As the program of treatment plant construction winds down, the emphasis in water pollution control will shift from construction to operation and monitoring. This action is to be implemented by RWQCB on a continuous basis. Total yearly cost of \$160,000, none of which is directly attributable to this plan, is financed by a State appropriation.

Also under the fourth policy, Action 4.3 is to publish an annual report summarizing the results of dischargers' self-monitoring programs. This is to be done by RWQCB and local agencies annually. Total yearly cost of \$32,000 is financed by the State.

4. The fifth policy in this plan is to "provide facilities needed for municipal sewerage service and water quality protection." Action 5.2 under this policy is to issue and update limits for municipal dischargers in conformance with the Environmental Management Plan. This is to be done by RWQCB on a continuous basis. Total yearly cost of \$94,000, none of which is directly attributable to this plan, is paid for by a State appropriation.

5. The sixth policy in this plan is to "encourage consolidation of treatment facilities and discharge of wastewater to well-mixed receiving waters where economically justified and environmentally desirable." Action 6.1 under this policy is to review all proposed facilities for consistency with the above policy. This is to be implemented by SWRCB, RWQCB, the Bay Area 208 agency and ABAG in an A-95 advisory capacity. The schedule is continuous. Total cost is \$4,000, and it is paid for by State appropriations and EPA grants.

6. The eighth policy in this plan is to "establish a program of surface runoff controls that emphasize low cost measures to reduce the pollutant load from this source." Action 8.2 under this policy is to conduct regional aspects of surface runoff programs. Regional aspects include modeling of effects on the Bay-Delta, public education, model ordinances, assistance on determination of management practices. The action is to be implemented by ABAG/RWQCB on a continuous basis. Costs are to be determined, and financing is by Federal "208" funds and/or State program funds.

7. The ninth policy in this plan is to "provide facilities needed for industrial wastewater treatment and disposal and water quality protection." Action 9.2 under this policy is to issue and update permits for direct industrial discharges. It is to be implemented by RWQCB on a continuous basis. Total cost of the action is \$220,000 per year, none of which is directly attributable to this plan, and is paid for by State appropriation.

8. The tenth policy in this plan is to "reduce sewage pollution from vessels, including houseboats, in the Bay-Delta system." Under this policy, Action 10.1 is to improve monitoring and documentation of vessel waste pollution by conducting periodic bacterial sampling of waters at all areas of small boat congregation and documenting the effectiveness of current programs. The action is to be implemented by RWQCB in consultation with county health departments. It is to take place on a quarterly basis commencing December 1978. Annual cost is \$150,000, paid for by State and EPA grants.

Also under the tenth policy, Action 10.2 is to conduct public hearing(s) and establish a discharge prohibition as appropriate. If a discharge prohibition for the entire Bay-Delta system is not justified based on the information currently available, the results of Action 10.1 (above) will be used to determine the need for prohibitions in environmentally sensitive areas. This action is to be implemented by RWQCB by June 1978. It is without cost.

Finally under this policy, Action 10.3 is to inform the boating public of marine sanitation device programs, and to provide information on the types of devices, matching shoreside facilities, schedules, procedures and costs. It is to be implemented by RWQCB and the U.S. Coast Guard in 1978 and 1979. Total cost per year is \$5,000, paid for by State appropriation and Federal program funds.

9. The eleventh policy in this plan is to "improve wastewater disposal practices in unsewered areas." Action 11.1 under this policy is in part to establish minimum regionwide standards for on-site disposal systems. These standards are for the selection, design, evaluation and construction of on-site disposal systems, and they would preclude substandard "interim" on-site systems awaiting a "future" sewer. This action is to be implemented by RWQCB with assistance from county health departments by December 1979 and annually thereafter. Its annual cost of \$10,000 is paid for out of State funds, Federal grants, and local funds.

Solid Waste Management Plan

1. The fourth policy in this plan is that "all solid waste disposal sites must be situated, designed, operated, and eventually closed down in a proper manner to provide protection to the surface and ground water quality and the natural environment as well as protection of public health and safety." Action 4.1 under this policy

is to accelerate the adoption and updating of the Waste Discharge Requirements for all landfill sites. This is to be implemented by RWQCB with cooperation from the State Solid Waste Management Board by December 1978. The action's annual cost of \$184,000 is to be financed out of State general funds.

2. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means; a) Clarify existing regulations including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies with responsibility for regulating energy recovery facilities, including RWQCB); b) Assign a staff member knowledgeable in solid waste management to assist applicant in early identification of permit requirements (this is to be implemented by county solid waste management agencies); and c) Hold meeting prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by project applicant (this is to be implemented by county solid waste management agencies or by project applicant (this is to be implemented by county solid waste management agencies or other permitting agencies, including RWQCB, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of county general funds, fees and surcharges, and regulatory agencies' operating funds. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

3. The ninth policy in this plan is that "Federal, State and local governments should adopt legislative and administrative changes to support stable, adequate markets for secondary materials and products made from them" Action 9.2 under this policy is to adopt preferential purchasing policies for products containing secondary materials, where appropriate. This action is to be implemented by ABAG, regional agencies, including RWQCB, and local governments as soon as possible. The total cost is \$190,000 with no financing mechanism needed.

4. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs, where appropriate." Action 10.3 under this policy is to establish office paper recycling programs. Data and experience of the public agency programs would be used to expand recycling into the private sector. This action is to be implemented by ABAG and other regional agencies, including RWQCB, local governments and the private sector. The schedule for action is May 1978 for ABAG. The total cost of \$45,000 is to be financed by sales of used paper.

5. The eleventh policy in this plan is that "adequate planning for hazardous waste management requires accurate data." Action 11.3 under this policy is to determine whether there is a need for additional Class I site capacity in the Bay Area and to determine waste quantities that can be handled at each existing Class I site. The action is to be implemented by the State Health Department in conjunction with RWQCB, the State Solid Waste Management Board, ABAG, and the counties on an ongoing basis. The total cost of \$21,000 is paid for by a SSWMB grant. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

6. The twelfth policy in this plan is that "hazardous industrial waste reduction, and recovery should be promoted in the interest of limiting land disposal." Under this policy, Action 12.1 is to encourage industry to make changes in its processes to reduce the amount of hazardous waste generated. The action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds, and the California Pollution Control Financing Authority. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

Also under this policy, Action 12.2 is to encourage hazardous waste source separation by encouraging industry to avoid mixing waste to facilitate recycling. This action is to be implemented by the State Health Department with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds and State Senate Bill 650 funds. An agreement is to be negotiated between ABAG, State agencies and county solid waste management agencies.

Finally under the twelfth policy, Action 12.4 is to investigate the consolidation of hazardous wastes for processing. This action is to be implemented by the State Health Department with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The total cost of \$30,000 is to be paid for by the Federal Resource Conservation and Recovery Act and by State funds. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

7. The thirteenth policy in this plan is that "regulations should ensure safe and proper handling of hazardous wastes." Action 13.6 under this policy is to establish and enforce regulations and establish a permit and monitoring system for on-site disposal of hazardous waste. This action is to be implemented by the State Health Department, the Bay Area Air Pollution Control District,

RWQCB, and county solid waste management agencies by 1978. The annual cost of \$53,000 is to be financed by the Federal Resource Conservation and Recovery Act, State funds, and disposal fees.

8. The fifteenth policy in this plan is that "the regional Wastewater Solids Study recommendations, when completed, should be integrated into local and regional solid waste management plans." Under this policy, Action 15.2 is to integrate the Wastewater Solids Study recommendations into regional and local solid waste management plans. Regional issues identified in the regional wastewater solids management plan shall be addressed in the continuing planning process of the Environmental Management Plan. This action is to be implemented by ABAG in connection with the State Water Resources Control Board, RWQCB, other designated wastewater management agencies and county solid waste management agencies. The schedule for action is continuous after December 1977. Costs are to be determined, with financing by Federal grants.

9. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the County Solid Waste Management Plans, the Environmental Management Plan (208 plan), and Federal and State requirements. Under this policy, Action 16.2 is to review proposed facilities plans and approve those that are consistent with the regional solid waste management plan and the 20-year project list in the 208 plan. This action is to be implemented by EPA, SWRCB, RWQCB, the State Health Department, ABAG, and the State Clearinghouse by 1979. The total annual cost of the action, none of which is directly attributable to this plan, is \$4,000, with financing by Federal and State grants, and local and State general funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including RWQCB, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.4 is

to execute a Memorandum of Understanding to integrate Bay Area water quality planning, including the establishment of a joint water quality planning staff similar to that for air quality planning. This staff would be drawn from ABAG and the Regional Water Quality Control Board. This action is to be implemented by ABAG and the San Francisco Bay Regional Water Quality Control Board in 1978. Its minor administrative cost would be covered by Federal and State grants with local match if required.

Also under the first policy, Action 1.7 is to continue the Program Review Board. ABAG and other agency officials and staff would report on the plan update progress. This action is to be implemented by EPA, SWRCB, RWQCB, the Air Resources Board, the Governor's Office of Planning and Research, and the State Solid Waste Management Board on an ongoing basis. Its minor administrative cost would be covered by Federal and State grants with local match if required.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by the Metropolitan Transportation Commission, the Bay Area Air Pollution Control District, RWQCB, SWRCB, the State Solid Waste Management Board, the Air Resources Board, EPA, and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

3. The third policy for the Continuing Planning Process is that "regional water quality management planning should be continued." Action 3.3 under this policy is to update the water quality element of the Environmental Management Plan. This includes the 20-year project list and the county surface runoff plan. The action is to be implemented by ABAG, RWQCB, and the county lead agencies on an annual basis from 1979. Cost are undetermined and would be financed by Federal and State grants with local match if required.

WATER MANAGEMENT COORDINATING COMMITTEE

Water Supply Management Plan

1. The first policy in this plan is to "provide a safe and reliable water supply to all citizens at a minimum monetary and environmental cost." Action 1.1 under this policy is to establish the water resource management coordinating committee (WMCC). The WMCC is requested to consider the following: a) Evaluate the advantages and disadvantages of increased interagency water transfer; b) Evaluate the costs and benefits of accepting restrictions on water use during droughts; c) Evaluate need for new water supply projects, including interties, prior to 1985 giving priority to water conservation and reclamation; d) Prepare a drought contingency plan; e) Conduct survey of status, use and plans for all groundwaters in region; f) Prepare regional groundwater basis management plan; and g) Evaluate the

quality of water for domestic use including an examination of the effect of further withdrawals of fresh water from the Delta and impacts which percolation of imported water may have on quality of underground water supplies in the region. For items "e" and "f" the General Assembly requests specific consideration (and a report back to it) of the implications costs and advisability of the proposed studies. Initially the WMCC will include management representatives of all major water agencies in the Bay region. The goal will be to meet as an informal committee to discuss and define the region's need for cooperative water supply management and to determine whether a permanent organizational structure and what membership would be appropriate for an ongoing regional effort. The committee will include at least one agency from each county. In counties where there is no single major agency the agencies in each county will determine their method of representation on the WMCC. This action is to be implemented by WMCC by July 1978. Its undetermined costs are to be determined by the WMCC and may be financed by dues paid by committee members or the contribution of individual agency's staff time. It is a voluntary action.

2. The second policy in this plan is to "encourage water saving." Action 2.4 under this policy is to evaluate the need for a regionally coordinated public information/education program. The action is to be implemented by WMCC by December 1978. Its undetermined costs are to be paid for by WMCC funds (see Action 1.1).

Also under the second policy, Action 2.6 is to make public as economically as possible data on annual water use and conservation in the region. This action is to be implemented by WMCC/water agencies, the State Department of Water Resources, and the media on an annual basis. Costs are undetermined.

Also under this policy, Action 2.7 is to evaluate changing water rate structures to encourage water saving. This action is implemented by WMCC considering it and water agencies acting on it. The schedule for action is December 1978. Costs are undetermined and would be financed by user charges.

Finally under the second policy, Action 2.9 is to establish a program to promote landscaping appropriate to the Bay Area climate. Plants native to the Bay Area are adapted for survival in the prevailing climate. They do not require large quantities of water. This action might be implemented as part of a regionally coordinated public education/information program (see Action 1.10. Implementation is by WMCC/water agencies by December 1978. Costs are undetermined.

BAY AREA AIR POLLUTION CONTROL DISTRICT

Solid Waste Management Plan

1. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies with responsibility for regulating energy recovery facilities, including the Bay Area Air Pollution Control District); b) Assign a staff member--knowledgeable in solid waste management to assist applicants in early identification of permit requirements (this is to be implemented by county solid waste management agencies); and c) Hold meetings prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by project applicant (this is to be implemented by county solid waste management agencies or other permitting agencies, including BAAPCD, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of county general funds, fees and surcharges, and regulatory agencies' operating funds. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

2. The ninth policy in this plan is that "Federal, State and local governments should adopt legislative and administrative changes to support stable, adequate markets for secondary materials and products made from them." Action 9.2 under this policy is to adopt preferential purchasing policies for products containing secondary materials, where appropriate. This action is to be implemented by ABAG, regional agencies, including BAAPCD, and local governments as soon as possible. The total cost is \$190,000, with no financing mechanism needed.

3. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs, where appropriate." Action 10.3 under this policy is to establish office paper recycling programs. Data and experience of the public agency programs would be used to expand recycling into the private sector. This action is to be implemented by ABAG and other regional agencies, including BAAPCD, for local governments and the private sector. The schedule for action is May 1978 for ABAG. Total cost is \$45,000, with financing by sales of used paper.

4. The thirteenth policy in this plan is that "regulations should ensure safe and proper handling of hazardous wastes." Action 13.6 under this policy is to establish and enforce regulations and establish a permit and monitoring system for on-site disposal of hazardous waste. The action is to be implemented by the State Health Department, BAAPCD, RWQCB, and county solid waste management agencies by 1978. The annual cost of \$53,000 is to be financed by the Federal Resource Conservation and Recovery Act, State funds, and disposal fees.

Air Quality Management Plan

1. Stationary source control form a group of actions in this plan. The general policy here is to "reduce hydrocarbon emissions from stationary sources." Under this policy, Action 1 is to use available control technology on existing hydrocarbon sources, allowing a reasonable amortization schedule for air pollution control equipment. Available control technology means an emission limitation based on the maximum degree of reduction of hydrocarbons emitted from or which results from any emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs, determines is achievable for such facility through application of available methods, systems and techniques. Technology for selected processes, which have been included in the projections of emission reduction, are as follows:

<u>Process</u>	<u>Technology</u>
Organic storage.....	Secondary seals
Tar pots.....	Loading door assembly
Paint spray booth.....	Incinerator or low/no solvent coatings
Architectural coating.....	Low solvent coatings
Dry cleaning.....	Closed system with solvent recovery
Cable tar coating.....	Incineration
Gasoline bulk storage.....	Floating roof or fixed vapor recovery
Auto service station storage tanks.....	Balanced system
Auto fill operations.....	Balanced system

This action is to be implemented by the BAAPCD. It is to be adopted by 1980 and fully implemented by 1985. Total cost per year is \$529,000 for the public agency and \$18,000,000 privately. Administrative/regulatory financing mechanisms are a valorem tax revenues, Air Resources Board subvention funds, and Federal Clean Air Act funds. The operating/maintenance financing mechanism is private. Capital financing are private funds, the California Pollution Control Financing Authority, and Federal Small Business Administration Loan Programs.

Also under this general policy, Action 2 is to continue the review of new and modified industrial facilities (new source review), using offsets and/or other provisions of the Clean Air Act Amendments of 1977 to allow for a reasonable level of growth consistent with the requirements of the act. Use technology to produce the lowest achievable emission rate (LAER), as defined by the Clean Air Act Amendments of 1977, on new and expanded hydrocarbon sources. This action is to be implemented by BAAPCD, and is currently being implemented. Total costs are the increased cost to industry for emission offset purchases.

2. The last group of actions in this plan is called "Other Measures." The general policy here is to "ensure maintenance of the oxidant standard beyond 1985-87. Action 13 under this policy is to adopt between 1985 and 1987, and implement in 1990 or thereafter, one or more of the following measures to ensure maintenance of the oxidant standard through the year 2000, subject to further evaluation of the measures during the continuing planning process: a) Reduce hydrocarbon emissions from small gasoline engines; b) Reduce hydrocarbon emissions from off-highway mobile sources; c) Implement more stringent vehicle exhaust emission controls - approximately 60-80 percent reduction below 1977 prescribed levels; and d) Provide additional transit. This action is to be implemented by the Air Resources Board, BAAPCD, ABAG, the Metropolitan Transportation Commission, and transit operators. It is to be adopted by 1985-87 and fully implemented by 1990-95. Costs and financing mechanisms are to be determined.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including BAAPCD, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.3 is to continue joint staff arrangements for air quality planning. This is to be implemented by ABAG, BAAPCD, MTC, ARB, Caltrans, and EPA through an ongoing memorandum of understanding. The action has no costs.

Also under the first policy, Action 1.8 is to continue a broad-based public participation program during the continuing planning process. Special efforts would be made to involve low-income, minority and age-category groups in the program. Adequate time would be allowed for public review and comment to plan amendments and the annual plan update. This action is to be implemented by ABAG and other participating agencies, including BAAPCD, on an ongoing basis. The total yearly cost of \$150,000 will be paid for by Federal and State grants with local match if required.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by the Metropolitan Transportation Commission, BAAPCD, RWQCB, the State Water Resources Control Board, the State Solid Waste Management Board, ARB, EPA and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

3. The sixth policy for the Continuing Planning Process is that "regional air quality planning should be continued." Action 6.1 under this policy is to update the initial air quality plan to cover other pollutants, including but not limited to sulfur dioxide, carbon monoxide, and particulate matter. This covers the other pollutants where potentially serious air quality problems exists in the region. The action is to be implemented by ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties by October 1978. Its undetermined cost will be paid for by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.2 is to review programs made to implement actions to reduce hydrocarbon emissions and determine if reasonable further progress is being made between 1979 and 1982 toward attainment of the Federal oxidant standard. Implementing agencies for this action are ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties. Action is scheduled for 1979 and annually thereafter. The undetermined costs are to be financed by Federal and State grants with local match if required.

Also under this policy, Action 6.3 is to establish a regional industrial siting program for analyzing alternative sites, sizes, production processes and environmental control techniques. This is required by the Clean Air Act Amendments of 1977 if the region cannot attain the Federal oxidant standard by 1982 and is to be granted an extension to 1987. This action is to be implemented by ABAG (with Regional Planning Committee involvement, BAAPCD, MTC, ARB, Caltrans, cities and counties by 1979. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Finally under this policy, Action 6.4 is to evaluate and propose procedures other than case-by-case offset for permitting industrial growth, with consideration given to any potential competitive advantages or disadvantages to the region that could result from implementation of such procedures. The action is to be implemented by ABAG, BAAPCD, ARB, cities and counties by 1979 and annually thereafter. Its undetermined cost is to be financed by Federal and State grants with local match if required.

4. The seventh policy for the Continuing Planning Process is that "continued planning requires the completion of tasks that are integrative among the several management plans." Action 7.4, under this policy is to examine and develop recommendations for resolving conflicts between energy generation facilities and air quality standards. This action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAPCD, county solid waste management agencies, and energy project proponents by 1979. Costs are undetermined, with financing by Federal and State grants with local match if required.

METROPOLITAN TRANSPORTATION COMMISSION

Solid Waste Management Plan

1. The ninth policy in this plan is that "Federal, State and local governments should adopt legislative and administrative changes to support stable, adequate markets for secondary materials and products made from them." Action 9.2 under this policy is to adopt preferential purchasing policies for products containing secondary materials, where appropriate. This action is to be implemented by ABAG, regional agencies, including the Metropolitan Transportation Commission, and local governments as soon as possible. The total cost is \$190,000, with no financing mechanism needed.

2. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs, where appropriate." Action 10.3 under this policy is to establish office paper recycling programs. Data and experience of the public agency programs would be used to expand recycling into the private sector. This action is to be implemented by ABAG and other regional agencies, including MTC, local governments and the private sector. The schedule for action is May 1978 for ABAG. The total cost of \$45,000 is to be financed by sales of used paper.

Air Quality Management Plan

1. Transportation controls form a group of actions in this plan. The general policy here is to "reduce motor vehicle emissions through transportation actions to reduce vehicle use." Under this

policy, Action 7 involves the establishment of preferential parking for carpools and vanpools. The action is to be implemented by cities, counties, employers, and MTC. It is to be adopted by 1978, fully implemented by 1985, and it is to cost \$886,000 annually.

Also in this group of actions, Action 8 is to pursue a three-fold transit improvement strategy: (1) MTC, in cooperation with transit operators, will adopt service improvement objectives which can be financed by the existing commitment of resources of transit. Improved capacity, service, and ridership are contemplated. A measure of the improvement expected should be agreed to and committed to in the context of the Regional Transportation Plan by October 1, 1978. (2) MTC will continue its efforts to identify the need for additional services (as it has, for example, in the elderly and handicapped program and more recently in the Minority Transportation Needs Assessment Project (MTNAP) and to pursue providing additional services as they are justified. A measure of the improvement expected will continue to be developed as these special needs are examined and as the demand for transit services expands generally. (3) During the commute hours, all major transit systems in the Bay Area are at capacity. Any substantial increase in ridership will be dependent upon increased Federal or State financial assistance. The amount of ridership increase is directly affected by the amount of increased State and Federal funding. Provision of additional transit capacity represents a positive transportation strategy. Thus the State and Federal governments are encouraged to provide necessary funding support for transit improvements to offset any air quality deficiencies caused by deleting less desirable transportation control measures. Without this financial support, transit capacity cannot be significantly expanded. This action is to be implemented by MTC and transit districts (e.g. Muni, AC, BART). It is to be adopted in 1978 and fully implemented by 1985 at a total cost of \$32.2 million. Financing mechanisms are Federal Mass Transportation Assistance Programs, fare revenues, Local Transportation Development Act funds, and State Highway Trust Fund diversions.

Also in this group of actions, Action 10 is to provide more ride sharing services such as jitneys and vanpools. Objectives need to be developed and monitored to gauge the desirable rate of expansion. This action is to be implemented by Caltrans, employers, and MTC. It has been previously adopted and is scheduled for full implementation by 1979. The total annual cost of \$300,000 is to be financed by Federal Transportation Funding.

Also under the Transportation Controls, Action 11 is to develop more extensive and safe bicycle systems and storage facilities. Objectives need to be developed and monitored to gauge the desirable rate of expansion. This action is to be implemented by cities, counties,

MTC, and Caltrans. Adoption is scheduled for 1980 and full implementation by 1985. The total annual cost is \$438,000 and is to be paid for out of Federal Aid Highway Programs and Local Transportation Development Act funds.

Also in this group, Action 12 is that MTC is requested to consider the following action: "Complete construction of certain portions of State freeway systems in which there are now pollution-causing gaps." This action is to be implemented by MTC in 1978. It is without cost.

2. The last portion of this plan is titled "Other Measures." The general policy here is to "ensure maintenance of the oxidant standard beyond 1985-87." Under this policy, Action 13 is to adopt between 1985 and 1987, and implement in 1990 or thereafter, one or more of the following measures to ensure maintenance of the oxidant standard through the year 2000, subject to further evaluation of the measures during the continuing planning process: a) Reduce hydrocarbon emissions from small gasoline engines; b) Reduce hydrocarbon emissions from off-highway mobile sources; c) Implement more stringent vehicle exhaust emission controls - approximately 60-80 percent reduction below 1977 prescribed levels; and d) Provide additional transit.

Implementing agencies are the Air Resources Board, the Bay Area Air Pollution Control District, ABAG, MTC, and transit operators. Adoption of the action is scheduled for 1985-87 and full implementation by 1990-95. Costs and financing are to be determined.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including MTC, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.3 is to continue joint staff arrangements for air quality planning. This is to be implemented by ABAG, MTC, ARB, Caltrans, and EPA through an ongoing memorandum of understanding. The action has no costs.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by MTC, BAAAPCD, the Regional Water Quality Control Board, the State Water Resources Control Board, the State Solid Waste Management Board, ARB, EPA and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

3. The sixth policy for the Continuing Planning Process is that "regional air quality planning should be continued." Action 6.1 under this policy is to update the initial air quality plan to cover other pollutants, including but not limited to sulfur dioxide, carbon monoxide and particulate matter. This covers the other pollutants where potentially serious air quality problem exist in the region. The action is to be implemented by ABAG, BAAAPCD, MTC, ARB, Caltrans, cities and counties by October 1978. Its undetermined cost will be paid for by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.2 is to review programs made to implement actions to reduce hydrocarbon emissions and determine if reasonable further progress is being made between 1979 and 1982 toward attainment of the Federal oxidant standard. Implementing agencies for this action are ABAG, BAAAPCD, MTC, ARB, Caltrans, cities and counties. Action is scheduled for 1979 and annually thereafter. The undetermined costs are to be financed by Federal and State grants with local match if required.

Finally under this policy, Action 6.3 is to establish a regional industrial siting program for analyzing alternative sites, sizes, production processes and environmental control techniques. This is required by the Clean Air Act Amendments of 1977 if the region cannot attain the Federal oxidant standard by 1982 and is to be granted an extension to 1987. The action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAAPCD, ARB, Caltrans, cities and counties by 1979. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

SAN FRANCISCO BAY REGION WASTEWATER SOLIDS STUDY

Solid Waste Management Plan

1. The fifteenth policy in this plan is that "the regional Wastewater Solids Study recommendations, when completed, should be integrated into local regional solid waste management plans." Action 15.1 under this policy is to complete the regional plan for long-term wastewater solids management to become part of the regional Solid Waste Management Plan. This action is to be implemented by the San Francisco Bay Region Wastewater Solids Study (WSS) by 1978. The total cost of \$752,000, none of which is directly attributable to the Environmental Management Plan, is paid for by Federal and State grants and local funds.

2. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the county solid waste management plans, the Environmental Management Plan (208 plan), and Federal and State requirements." Action 16.1 under this policy is to develop facilities plans for wastewater solids management based on the regional wastewater solids plan. For purposes of implementation, the Wastewater Solids Study will develop facilities plans for the East Bay Municipal Utility District, the Central Contra Costa Sanitary District, the City and County of San Francisco, and the cities of San Jose/Santa Clara; other wastewater agencies will develop their own facilities plans as necessary. The schedule is December 1978 for initial facilities plans. Total cost is \$912,000, with financing by Federal and State grants and local funds.

BAY AREA RAPID TRANSIT DISTRICT (BART)

Air Quality Management Plan

1. Transportation controls form a group of actions in this plan. The general policy here is to "reduce motor vehicle emissions through transportation actions to reduce vehicle use." Under this policy, Action 8 is to pursue a three-fold transit improvement strategy: (1) MTC, in cooperation with the transit operators, will adopt service improvement objectives which can be financed by the existing commitment of resources to transit. Improved capacity, service, and ridership are contemplated. A measure of the improvement expected should be agreed to and committed to in the context of the Regional Transportation Plan by October 1, 1978. (2) MTC will continue its efforts to identify the need for additional services (as it has, for example, in the elderly and handicapped program and more recently in the Minority Transportation Needs Assessment Project (MTNAP) and to

pursue providing additional services as they are justified. A measure of the improvement expected will continue to be developed as these special needs are examined and as the demand for transit services expands generally. (3) During the commute hours, all major transit systems in the Bay Area are at capacity. Any substantial increase in ridership will be dependent upon increased Federal or State financial assistance. The amount of ridership increase is directly affected by the amount of increased State and Federal funding. Provision of additional transit capacity represents a positive transportation strategy. Thus the State and Federal governments are encouraged to provide necessary funding support for transit improvements to offset any air quality deficiencies caused by deleting less desirable transportation control measures. Without this financial support, transit capacity cannot be significantly expanded. This action is to be implemented by the Metropolitan Transportation Commission and transit districts (e.g. Muni, AC, BART). It is to be adopted in 1978 and fully implemented by 1985 at a total cost of \$32.2 million. Financing mechanisms are Federal Mass Transportation Assistance Programs, fare revenues, Local Transportation Development Act funds, and State Highway Trust Fund diversions.

2. The last portion of this plan is titled "Other Measures." The general policy here is to "ensure maintenance of the oxidant standard beyond 1985-87." Under this policy, Action 13 is to adopt between 1985 and 1987, and implement in 1990 or thereafter, one or more of the following measures to ensure maintenance of the oxidant standard through the year 2000, subject to further evaluation of the measures during the continuing planning process: a) Reduce hydrocarbon emissions from small gasoline engines; b) Reduce hydrocarbon emissions from off-highway mobile sources; c) Implement more stringent vehicle exhaust emission controls - approximately 60-80 percent reduction below 1977 prescribed levels; and d) Provide additional transit. Implementing agencies are the Air Resources Board, the Bay Area Air Pollution Control District, ABAG, the Metropolitan Transportation Commission, and transit operators, including BART. Adoption of the action is scheduled for 1985-87 and full implementation by 1990-95. Costs and financing are to be determined.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including BART, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

ACTIONS APPLICABLE TO STATE AGENCIES AND THE CALIFORNIA LEGISLATURE

A large number of State agencies is designated in the Environmental Management Plan to have implementation responsibility. Additional actions are also directed to the California Legislature. The following list can be used as a guide to those State agencies implicated by the EMP.

- o California State Legislature - Plan Implementation.
- o State Water Resources Control Board (SWRCB) - Water Quality Management Plan, Solid Waste Management Plan, Plan Implementation, Continuing Planning Process.
- o State Department of Health - Water Quality Management Plan, Water Supply Management Plan, Solid Waste Management Plan, Plan Implementation, Continuing Planning Process.
- o State Department of Fish and Game - Water Quality Management Plan, Plan Implementation.
- o State Department of Navigation and Ocean Development - Water Quality Management Plan, Plan Implementation.
- o Governor's Office of Navigation and Ocean Development - Water Quality Management Plan, Plan Implementation.
- o Governor's Office of Appropriate Technology - Water Quality Management Plan, Plan Implementation.
- o State Department of Water Resources - Water Supply Management Plan, Plan Implementation.
- o State Solid Waste Management Board (SSWMB) - Solid Waste Management Plan, Plan Implementation, Continuing Planning Process.
- o State Clearinghouse - Solid Waste Management Plan, Plan Implementation.
- o State Air Resources Board (ARB) - Solid Waste Management Plan, Air Quality Management Plan, Plan Implementation, Continuing Planning Process.
- o State Bureau of Automotive Repair - Air Quality Management Plan, Plan Implementation.
- o State Department of Transportation (Caltrans) - Air Quality Management Plan, Plan Implementation, Continuing Planning Process.

CALIFORNIA STATE LEGISLATURE

Plan Implementation

1. The second policy for Plan Implementation is that "Federal and State governments should make legislative and administrative changes to carry out Environmental Management Plan recommendations as necessary." Action 2.1 under this policy is to provide additional funding for the California Department of Health to establish and carry out regulations for commercial and recreational shellfish harvesting in San Francisco Bay. This action supports Policy 3 and its actions in the Water Quality Management Plan. It is to be implemented by the California Legislature as soon as possible.

Also under this policy, Action 2.2 is to enact legislation to require existing marinas and harbors to provide on-shore toilet facilities. This action supports Policy 10 and its actions in the Water Quality Management Plan. It is to be implemented by the California Legislature as soon as possible.

Also under the second policy, Action 2.3 is to enact legislation on liability requirements and compensation to minimize water pollution from oil spills, unless this is preempted by Federal law. This action supports Policy 12 and its actions in the Water Quality Management Plan. It is to be implemented by the California Legislature as soon as possible.

Also under this policy, Action 2.4 is to enact legislation requiring cities and counties to revise and update building codes to include water conservation in new construction, if this is determined to be necessary by the time of the first annual revision of the Environmental Management Plan. This action supports Policy 2 and its actions in the Water Supply Management Plan. It is to be implemented by the California Legislature as soon as possible.

Also under this policy, Action 2.5 is to enact legislation providing incentives for water conservation in existing building and for agricultural water conservation. This action supports Policy 2 and its actions in the Water Supply Management Plan. It is to be implemented by the U.S. Congress and the California Legislature as soon as possible.

Also under the second policy, Action 2.6 is to enact legislation to promote waste reduction where appropriate, and to support stable, adequate markets for secondary materials and products made from them. This action supports Policies 6 and 8 of the Solid Waste Management Plan. It is to be implemented by the U.S. Congress and the California Legislature as soon as possible.

Also under this policy, Action 2.7 is to provide increased financial support for job retraining programs and workers displaced by new air quality stationary source control. This action supports Policy 1 in the Air Quality Management Plan. It is to be implemented by the U.S. Congress and the California Legislature as soon as possible.

Also under the second policy, Action 2.8 is to enact legislation to implement a Statewide inspection/maintenance program for light and heavy duty vehicles. This action supports Policy 2 in the Air Quality Management Plan. It is to be implemented by the California Legislature as soon as possible.

Also under this policy, Action 2.9 is to enact legislation to require exhaust control devices on existing heavy duty gasoline vehicles Statewide. This action supports Policy 2 in the Air Quality Management Plan. It is to be implemented by the California Legislature as soon as possible.

Also under the second policy, Action 2.10 is to provide additional financial support for local transit operators to substantially increase regional transit service as a means of achieving Federal and State air quality standards. This action supports Policy 3 in the Air Quality Management Plan. It is to be implemented by the U.S. Congress and the California Legislature as soon as possible.

Finally under the second policy, Action 2.12 is to provide necessary funding for local government agencies to carry out regulations and programs outlined in this Plan. This recommendation supports the capacity of local government to carry on the Environmental Management Plan. This action is to be implemented by the California Legislature, U.S. Congress, and local government based upon future income sources. Implementation is scheduled on an as needed basis. Costs are not applicable. Financing mechanisms are Federal and State budgets and local taxing authority and fee setting or assessment ability.

STATE WATER RESOURCES CONTROL BOARD (SWRCB)

Water Quality Management Plan

1. The first policy in this plan is to "improve understanding of Bay-Delta estuarine system and the fate and effects of pollutants entering it." Action 1.2 under this policy is to conduct receiving water monitoring program for San Francisco Bay. This two-year program will be designed by the San Francisco Research Advisory Council under the direction of SWRCB and RWQCB. The results of the program will be used to shape dischargers monitoring requirements including pretreatment in the future. The program should evaluate the need for a permanent centralized monitoring and research organization after fully exploring coordination of laboratory and field work presently performed by dischargers. This action is to be implemented by RWQCB/SWRCB/San Francisco Bay Delta Research Advisory Council by June 1978. The total cost is \$1 million each year for 2 years, none of which is directly attributable to this plan. Financing is by Federal "201" funds, State and local funds.

Also under the first policy, Action 1.3 is to evaluate and establish research goals. This is to be implemented by SWRCB and RWQCB advised by SFBDRAC, and is to take place in December, 1979 and annually thereafter. Total cost per year is \$15,000 with financing by Federal "208" or State program funds.

2. The sixth policy in this plan is to "encourage consolidation of treatment facilities and discharge of wastewater to well-mixed receiving waters where economically justified and environmentally desirable." Action 6.1 under this policy is to review all proposed facilities for consistency with the above policy. It is to be implemented by SWRCB, RWQCB, the Bay Area 208 agency and ABAG in an A-95 advisory capacity. It is to take place on a continuous basis. Total cost per year of \$4,000 is to be paid for by State appropriation and EPA grants.

3. The eleventh policy in this plan is to "improve wastewater disposal practices in unsewered areas." Action 11.6 under this policy is to revise State grant programs to ensure consideration for funding on-site systems. The purpose is to increase the number of on-site system and maintenance district components eligible for funding. This action is to be implemented by SWRCB on an ongoing basis.

4. The twelfth policy in this plan is to "monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in the Bay Area." Action 12.2 under this policy is to establish a task force to investigate non-petroleum hazardous chemical spill problems in offshore waters, bays and estuaries of California, and make recommendations. The task force shall include representatives of the commercial shipping and fishing industry, others knowledgeable of chemical spills and their prevention, as well as public interest groups. The study is to concentrate on spills of chemicals other than petroleum. This action is to be implemented by SWRCB by October 1979. Total cost is \$20,000 for one year, paid for by Federal "208" funds and State program funds.

Solid Waste Management Plan

1. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies with responsibility for regulating energy recovery facilities, including SWRCB); b) Assign a staff member knowledgeable in solid waste management to assist applicants in early identification of permit requirements (this is to be implemented by county solid waste management agencies); and c) Hold meetings prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by project applicant (this is to be implemented by county solid waste management agencies or by other permitting agencies, including SWRCB, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of county general funds, fees and surcharges, and regulatory agencies' operating funds. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

2. The fifteenth policy in this plan is that "the regional Wastewater Solids Study recommendations, when completed, should be integrated into local and regional solid waste management plans." Under this policy, Action 15.2 is to integrate the Wastewater Solids Study recommendations into regional and local solid waste management plans. Regional issues identified in the regional wastewater solids management plan shall be addressed in the continuing planning process of the Environmental Management Plan. This action is to be implemented by ABAG in conjunction with SWRCB, RWQCB, other designated wastewater management agencies and county solid waste management agencies. The schedule for action is continuous after December 1977. Costs are to be determined, with financing by Federal grants.

3. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the County Solid Waste Management Plans, the Environmental Management Plan (208 plan), and Federal and State requirements. Under this policy, Action 16.2 is to review proposed facilities plans and approve those that are consistent with the regional solid waste management plan and the 20-year project list in the 208 plan. This action is to be implemented by EPA, SWRCB, RWQCB, the State Health Department, ABAG, and the State Clearinghouse by 1979. The total annual cost of the action, none of which is directly attributable to this plan, is \$4,000, with financing by Federal and State grants, and local and State general funds.

Plan Implementation

3. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including SWRCB, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.5 is to execute a Memorandum of Understanding between ABAG and the State Water Resources Control Board. This memorandum would integrate ABAG's grant review function under Circular A-95 with the SWRCB's decision-making responsibilities for 201 wastewater facilities projects. The action is to be implemented by ABAG and SWRCB in 1978. Its minor administrative cost is financed by Federal and State grants with local match if required.

Also under the first policy, Action 1.7 is to continue the Program Review Board. ABAG and other agency officials and staff would report on plan update progress. This action is to be implemented by EPA, SWRCB, RWQCB, the Air Resources Board, the Governor's Office of Planning and Research, and the State Solid Waste Management Board on an ongoing basis. Its minor administrative cost would be covered by Federal and State grants with local match if required.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by the Metropolitan Transportation Commission, the Bay Area Air Pollution Control District, RWQCB, SWRCB, the State Solid Waste Management Board, the Air Resources Board, EPA, and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

3. The third policy for the Continuing Planning Process is that "regional water quality management planning should be continued." Action 3.2 under this policy is to establish interim standards for delta outflow to the Bay during the winter months. To ensure that sufficient wintertime flood flows enter the Bay, it is recommended that an interim standard be established and that research by the San Francisco Bay Delta Research Advisory Council be designed to develop a basis for final standards. This action is to be implemented by SWRCB by June 1978. It has no cost.

STATE DEPARTMENT OF HEALTH

Water Quality Management Plan

1. The third policy in this plan is to "facilitate the re-establishment of recreational and commercial shellfish harvesting in the Bay as allowed by water quality." Billions of dollars have already been committed for improvements to sewage and industrial waste disposal systems to meet State and Federal requirements. Relatively modest additional expenditures on administrative and regulatory actions could re-establish recreational and commercial shellfishing. Action 3.1 under this policy is to conduct a preliminary survey and assessment of shellfish beds in the Bay. Major shellfish beds suitable for recreational harvesting would be identified and assessed. The types and sources of contaminants affecting these beds would also be identified. This action is to be implemented by the Regional Water Quality Control Board, the State Department of Health, and the State Department of Fish and Game by February 1978. Total cost is \$50,000, financed by EPA and/or State grants.

Action 3.2 under this policy is to establish a systematic monitoring and sampling program of selected shellfish beds. Based on the findings from Action 3.1 (above), a selected number of shellfish beds would be

monitored and sampled for bacterial contamination over at least a 12-month period. This action is to be implemented by RWQCB, the State Department of Health, and county health departments by June 1978. Total yearly cost of \$200,000 is financed by Federal grants and State funds from shellfish harvesting license fees.

Also under this policy, Action 3.3 is to establish an agreement between the State Department of Health and the State Department of Fish and Game for patrolling shellfish beds. If the findings from Action 3.2 (above) indicate recreational shellfish harvesting is safe, the Department of Fish and Game would have to patrol the beds, keeping people off unapproved and conditionally approved beds while allowing harvesting in approved beds. This action is to be implemented by the State Department of Health and the State Department of Fish and Game. Total cost per year is \$100,000, which is to be paid for from State funds from shellfish harvesting license fees.

Finally under the third policy, Action 3.4 is to establish criteria for commercial shellfishing in the Bay and evaluate methods of harvesting. The State Department of Health would establish the type and extent of pilot studies and routine monitoring required as prerequisites to any approval of commercial shellfishing in the Bay. This action is to be implemented by the State Department of Health by August 1978. Costs are to be determined, with financing by the State so as to augment the Health Department budget.

Water Supply Management Plan

1. The third policy in this plan is to "encourage safe and cost-effective wastewater reclamation." Action 3.3 under this policy is to expedite studies and standard setting for use of reclaimed wastewater for recharge and other purposes. This action is to be implemented by the State Department of Health on a continuous basis. Its undetermined costs are to be financed by budget action of the State Legislature.

Solid Waste Management Plan

1. The fourth policy in this plan is that "all solid waste disposal sites must be situated, designed, operated and eventually closed down in a proper manner to provide protection to the surface and ground water quality and the natural environment as well as protection of public health and safety." Action 4.2 under this policy is to issue and enforce permits for the operation of solid waste and hazardous waste facilities and disposal sites that are consistent with county and regional solid waste management planning. This action is to be implemented by the State Solid Waste Management Board, city and county enforcement agencies, the State Department of Health, and local health departments on an ongoing basis. Total cost per year is \$2,100,000, none of which is directly attributable to this plan, with financing by State and local general funds.

2. The eleventh policy in this plan is that "adequate planning for hazardous waste management requires accurate data." Action 11.1 under this policy is to conduct surveys of hazardous industrial wastes. The action is to be implemented by the State Department of Health with assistance from counties, SSWMB, and ABAG. The schedule for action is 1979. The action's total public cost of \$75,000 and total private cost of \$16,000 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds, including in-kind services. Agreements are to be negotiated between ABAG, State agencies, and the county solid waste management agencies.

Also under this eleventh policy, Action 11.2 is to conduct surveys of hazardous hospital wastes. The action is to be implemented by the State Department of Health with assistance from counties, SSWMB and ABAG by April 1980. The action's total public cost of \$4,900 and total private cost of \$900 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds, including in-kind services. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

Finally under this policy, Action 11.3 is to determine whether there is a need for additional Class I site capacity in the Bay Area and to determine waste quantities that can be handled at each existing Class I site. The action is to be implemented by the State Department of Health in conjunction with the Regional Water Quality Control Board, SSWMB, ABAG, and the counties on an ongoing basis. The total cost of \$21,000 is paid for by a SSWMB grant. Agreements are to be negotiated between ABAG, State agencies, and county solid waste management agencies.

3. The twelfth policy in this plan is that "hazardous industrial waste reduction, source separation, and recovery should be promoted in the interest of limiting land disposal." Action 12.1 under this policy is to encourage industry to make changes in its processes to reduce the amount of hazardous waste generated. The action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds, and the California Pollution Control Financing Authority. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

Also under the twelfth policy, Action 12.1 is to encourage hazardous waste source separation by encouraging industry to avoid mixing wastes to facilitate recycling. This action is to be implemented by the State Department of Health with assistance from ABAG; SSWMB, RWQCB and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds and State Senate Bill 650 funds. An agreement is to be negotiated between ABAG, State agencies and county solid waste management agencies.

Also under this policy, Action 12.3 is to encourage hazardous waste resource recovery. This involves providing incentives to industry for resource recovery such as: a) Low interest land for new equipment (implemented by the State Department of Health and SSWMB); b) A statewide waste exchange and marketing system (implemented by the State Department of Health); c) Information dissemination through business associations (implemented by ABAG and the State Department of Health); d) Guidance to industry on reusing waste (implemented by the State Department of Health); and e) Charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment (implemented by the State Department of Health and county solid waste management agencies.) All items are ongoing. The total cost per year of this action is \$18,000, which is to be financed by the Federal Resource Conservation and Recovery Act, the California Pollution Control Financing Authority, and State funds. Agreements are to be negotiated between ABAG, the State Department of Health, SSWMB, and county solid waste management agencies.

Finally under the twelfth policy, Action 12.4 is to investigate the consolidation of hazardous wastes for processing. This action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The total cost of \$30,000 is to be paid for by the Federal Conservation and Recovery Act and by State funds. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

4. The thirteenth policy in this plan is that "regulations should ensure safe and proper handling of hazardous wastes." Action 13.1 under this policy is to enforce proper labeling requirements. This involves requiring that containers used for storage, transport, or disposal of hazardous waste accurately identify their contents. This action is to be implemented by EPA and the State Department of Health on an ongoing basis. It has no cost.

Also under the thirteenth policy, Action 13.2 is to enforce adequate storage facilities requirements. This involves requiring that containers used for on-site storage for transport and for disposal be made of proper materials and designed so as to minimize the hazards of leaking or breaking. This action is to be implemented by EPA and the State Department of Health on an ongoing basis. It is without cost.

Also under this policy, Action 13.3 is to enforce requirements for adequate record-keeping practices by waste generators. This involves requiring that record-keeping practices accurately identify the type and the quantity of hazardous waste generated. This action is to be implemented by the State Department of Health. It is without cost.

Also under this policy, Action 13.5 is to ensure proper handling of hospital wastes. This involves requiring that infectious or pathological wastes from hospitals be disposed through incineration or processed for disposal to sewers. This action is to be implemented by the State Department of Health and local health departments, with completion scheduled by April 1980. Total annual cost of \$2,900 is to be paid for by the Federal Resource Conservation and Recovery Act and by State funds.

Finally, under the thirteenth policy, Action 13.6 is to establish and enforce regulations and establish a permit and monitoring system for on-site disposal of hazardous waste. The action is to be implemented by the State Department of Health, the Bay Area Air Pollution Control District, the Regional Water Quality Control Board, and county solid waste management agencies by 1978. The annual cost of \$53,000 is to be financed by the Federal Resource Conservation and Recovery Act, State funds, and disposal fees.

5. The fourteenth policy in this plan is that "future Class I disposal sites and facilities should be located so that they do not have adverse effects on human health and safety, air and water quality, wildlife, critical environmental resources and urbanized areas." Under this policy, Action 14.1 is to develop necessary arrangement that would lead to reservation and acquisition of sites if additional disposal capacity for hazardous wastes is needed (see Action 11.3). Pending the results of Action 11.3, affected counties will be convened to determine areas for further study and develop necessary intergovernmental and public-private arrangements for financing studies, reports, public review and site(s) reservation and/or acquisition. This action is to be implemented by affected local jurisdictions (to be determined), to be assisted by ABAG, SSWMB, and the State Department of Health if requested. The item is ongoing. Costs are to be determined, and no financing mechanism is needed at this time (contingent on Action 11.3); Federal and State grants will finance Action 14.1 if it is needed.

6. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the County Solid Waste Management Plans, the Environmental Management Plan (208 plan), and Federal and State requirements." Under this policy, Action 16.2 is to review proposed facilities plans and approve those that are consistent with the regional solid waste management plan and the 20-year project list in the 208 plan. This action is to be implemented by EPA, the State Water Resources Control Board, RWQCB, the State Department of Health, ABAG, and the State Clearinghouse by 1979. The total annual cost of the action, none of which is directly attributable to this plan, is \$4,000, with financing by Federal and State grants, and local and State general funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including the State Department of Health, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by the Metropolitan Transportation Commission, the Bay Area Air Pollution Control District, the Regional Water Quality Control Board, the State Water Resources Control Board, the State Solid Waste Management Board, the Air Resources Board, EPA, and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

STATE DEPARTMENT OF FISH AND GAME

Water Quality Management Plan

1. The third policy in this plan is to "facilitate the re-establishment of recreational and commercial shellfish harvesting in the Bay as allowed by water quality." Action 3.1 under this policy is to conduct a preliminary survey and assessment of shellfish beds in the Bay. Major shellfish beds suitable for recreational harvesting would be identified and assessed. The types and sources of contaminants affecting these beds would also be identified. This action is to be implemented by the Regional Water Quality Control Board, the State Department of Health, and the State Department of Fish and Game by February 1978. Total cost of the action is \$50,000, financed by EPA and/or State grants.

Also under the third policy, Action 3.3 is to establish an agreement between the State Department of Health and the State Department of Fish and Game for patrolling shellfish beds. If the findings from Action 3.2 indicate that recreational shellfish harvesting is safe, the Department of Fish and Game would have to patrol the beds, keeping people off unapproved and conditionally approved beds while allowing harvesting in approved beds. This action is to be implemented by the State Department of Fish and Game and the State Department of Health. Total yearly cost of \$100,000 is to be financed by State funds from shellfish harvesting license fees.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including the State Department of Fish and Game, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

STATE DEPARTMENT OF NAVIGATION AND OCEAN DEVELOPMENT

Water Quality Management Plan

1. The tenth policy in this plan is to "reduce sewage pollution from vessels, including houseboats, in the Bay-Delta system." Action 10.6 under this policy is to revise the State Department of Navigation and Ocean Development's loans and grants programs to fund pump-out facilities only as part of overall new harbor or marina packages. This action is to be implemented by the State Department of Navigation and Ocean Development. It is without cost.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including the State Department of Navigation and Ocean Development, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

GOVERNOR'S OFFICE OF APPROPRIATE TECHNOLOGY

Water Quality Management Plan

1. The eleventh policy in this plan is to "improve wastewater disposal practices in unsewered areas." Action 11.5 under this policy is to promote research of on-site disposal systems. The purpose of this is to improve on-site systems, and to develop new design and construction criteria and develop new systems. The action is to be implemented by the Governor's Office of Appropriate Technology and private industry on an ongoing basis. Costs are undetermined with financing by State funds, perhaps Federal subsidies, and private funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including the Governor's Office of Appropriate Technology, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

STATE DEPARTMENT OF WATER RESOURCES

Water Supply Management Plan

1. The second policy in this plan is to "encourage water saving." Action 2.6 under this policy is to make public as economically as possible data on annual water use and conservation in the region. This action is to be implemented by the Water Resource Management Coordinating Committee, water agencies, the State Department of Water Resources and media on an annual basis. Costs are undetermined.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including the State Department of Water Resources, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

STATE SOLID WASTE MANAGEMENT BOARD (SSWMB)

Solid Waste Management Plan

1. The third policy in this plan is that "the regional Solid Waste Management Plan should focus on multi-jurisdictional projects for waste reduction and recovery of materials and energy from solid waste." Action 3.1 under this policy is to review proposed resource recovery projects including large-scale waste combustion projects to ensure consistency with county regional solid waste management and other environmental goals and standards. The action is to be implemented by EPA, SSWMB, ABAG, and the State Clearinghouse on an ongoing basis. The total annual cost is \$6,000, paid for by Federal and State funds and ABAG dues.

Also under the third policy, Action 3.2 is to develop additional information that would lead to construction of a network of new resource recovery facilities through studies and demonstration projects, such as: a) Air quality, water quality, and other environmental effects of large-scale energy recovery systems; b) The impasse between overall long-term environmental benefits of waste-to-energy systems and air quality regulations; c) Technical feasibility as well as financial and social impacts of resource recovery projects; d) Size and location of potential markets for the resources that are to be recovered; e) Cost and energy requirements for source separated and mechanically separated materials; and f) Feasibility of cooperative arrangements among community recycling programs for transportation, warehousing, and marketing. The action is to be implemented by EPA, SSWMB in conjunction with cities, counties and ABAG, by 1982. The total cost is \$11,300,000, none of which is directly attributable to this plan, and is to be paid for by Federal and State funds, and by State Senate Bill 650 (1977).

2. The fourth policy in this plan is that "all solid waste disposal sites must be situated, designed, operated, and eventually closed down in a proper manner to provide protection to the surface and ground water quality and the natural environment as well as protection of public health and safety." Action 4.1 under this policy is to accelerate the adoption and updating the Waste Discharge Requirements for all landfill sites. This is to be implemented by RWQCB with cooperation from SSWMB by December 1978. The action's annual cost of \$184,000 is to be financed out of State general funds.

Action 4.2 under this policy is to issue and enforce permits for operation of solid waste and hazardous waste facilities and disposal sites that are consistent with county and regional solid waste management planning. This action is to be implemented by SSWMB, city and county enforcement agencies, and State and local health departments on an ongoing basis. Its annual cost of \$2,100,000, none of which is directly attributable to this plan, is paid for by State and local general funds. The SSWMB has the legal mandate to issue permits and may take legal action to ensure implementation.

3. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations, including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies, including SSWMB, with responsibility for regulating energy recovery facilities); b) Assign a staff member knowledgeable in solid waste management to assist applicant in early identification of permit requirements (this is to be implemented by county solid waste management agencies); and c) Hold meetings prior to public hearing for discussion of project-related issues - to be implemented by county solid waste management agencies, including SSWMB, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,000, paid for out of county general funds, fees and surcharges, and regulatory agencies' operating funds. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

4. The sixth policy in this plan is that "Federal, State and local public education programs are essential to promote awareness of the feasibility and need for waste reduction." Under this policy, Action 6.2 is to provide public information packets and multi-media programs on waste reduction. Introduce classes on waste reduction. This involves describing and illustrating ways to reduce use and increase reuse of materials. SSWMB and ABAG will apply for Federal funds to prepare and distribute throughout the region informational materials - brochures, filmstrips, etc. on ways that individuals can reduce waste

and reuse materials in their homes, schools, work and leisure places. Local school districts introduce school classes on waste reduction with assistance provided by SSWMB, ABAG, and local governments. This action is to be implemented by regional and local agencies, including school districts, as delegated by SSWMB, on a continuing basis. Total annual cost of \$202,000 is to be paid for out of the State General Fund via State SEnate Bill 650 (1977).

5. The eighth policy in this plan is to "facilitate regionwide cooperation in developing stable, adequate markets for secondary materials." Action 8.1 under this policy is to prepare and update a listing of buyers of secondary materials which would include estimates, quantifies, quality, and specifications on materials handled. The action is to be implemented by SSWMB in cooperation with ABAG and on a continuing basis. The total annual cost of \$500 is to be paid for out of State and Federal funds.

Also under the eighth policy, Action 8.2 is to provide a forum for coordination. This involves organizing meetings for representatives of recycling centers, local governments, citizen groups, secondary markets, and private enterprise. If appropriate, it also involves assisting in establishing a regional information center on recycling residential, commercial and industrial wastes. The action is to be implemented by SSWMB in cooperation with ABAG and on an ongoing basis. Its total annual cost of \$1,600 is to be financed by State and General funds.

6. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs, where appropriate." Action 10.1 under this policy is to provide information and assistance on source separation. It involves facilitating efforts of local governments, citizen groups, and collection companies by offering technical advice, contacting secondary material buyers, and by providing a forum for coordination of these efforts. It also involves providing information regarding available sources of funding for source separation programs. The action is to be implemented by ABAG in cooperation with SSWMB on an ongoing basis. The total cost per year is \$7,800, financed by ABAG dues, State and Federal grants, and State general funds.

Also under the tenth policy, Action 10.2 is to fund projects on source separation at the local, State and Federal levels. State and Federal legislatures should provide funding through grants or low-interest loans for source separation and recycling projects, including oil recovery. This action is to be implemented by the State and Federal legislatures, with SSWMB as the administering agency. It is on an ongoing basis. Total cost of the action is \$3,000,000, financed by State and Federal funds, including via State Senate Bill 650 (1977) and the California Pollution Control Financing Authority.

7. The eleventh policy in this plan is that "adequate planning for hazardous waste management requires accurate data." Action 11.1 under this policy is to conduct surveys of hazardous industrial wastes. The

action is to be implemented by the State Department of Health with assistance from counties, SSWMB and ABAG. The schedule for action is 1979. The action's total public cost of \$75,000 and total private cost of \$16,000 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds, including in-kind services. Agreements are to be negotiated between ABAG, State agencies, and the county solid waste management agencies.

Also under the eleventh policy, Action 11.2 is to conduct surveys of hazardous wastes. The action is to be implemented by the State Department of Health with assistance from counties, SSWMB and ABAG by April, 1980. The action's total public cost of \$4,900 and total private cost of \$900 is to be paid for by the Federal Resource Conservation and Recovery Act, the State Solid Waste Management Board, the Bay Area Solid Waste Management Project Phase II, and local matching funds, including in-kind services. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

Finally under the eleventh policy, Action 11.3 is to determine whether there is a need for additional Class I site capacity in the Bay Area and to determine waste quantities that can be handled at each existing Class I site. The action is to be implemented by the State Department of Health in conjunction with the Regional Water Quality Control Board, SSWMB, ABAG, and the counties on an ongoing basis. The total cost of \$21,000 is paid for by a SSWMB grant. Agreements are to be negotiated between ABAG, State agencies and county solid waste management agencies.

8. The twelfth policy in this plan is that "hazardous industrial waste reduction, source separation, and recovery should be promoted in the interest of limiting land disposal." Under this policy, Action 12.1 is to encourage industry to make changes in its processes to reduce the amount of hazardous waste generated. The action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation Act, State funds, and the California Pollution Control Financing Authority. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

Also under the twelfth policy, Action 12.2 is to encourage hazardous waste source separation by encouraging industry to avoid mixing wastes to facilitate recycling. This action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The annual cost of \$13,000 is to be paid for out of the Federal Resource Conservation and Recovery Act, State funds and State Senate Bill 650 funds. An agreement is to be negotiated between ABAG, State agencies and county solid waste management agencies.

Also under this policy, Action 12.3 is to encourage hazardous waste resource recovery. This involves providing incentives to industry for resource recovery such as: a) Low interest loans for new equipment (implemented by the State Department of Health and SSWMB); b) A Statewide waste exchange and marketing system (implemented by the State Department of Health); c) Information dissemination through business associations (implemented by ABAG and the State Department of Health); d) Guidance to industry on reusing waste (implemented by the State Department of Health); and e) Charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment (implemented by the State Department of Health and county solid waste management agencies.) All items are ongoing. The total cost per year of this action is \$18,000, which is to be financed by the Federal Resource Conservation and Recovery Act, the California Pollution Control Financing Authority, and State funds. Agreements are to be negotiated between ABAG, the State Department of Health, SSWMB, and county solid waste management agencies.

Finally under the twelfth policy, Action 12.4 is to investigate the consolidation of hazardous wastes for processing. This action is to be implemented by the State Department of Health with assistance from ABAG, SSWMB, RWQCB, and county solid waste management agencies on an ongoing basis. The total cost of \$30,000 is to be paid for by the Federal Resource Conservation and Recovery Act and by State funds. An agreement is to be negotiated between ABAG, State agencies, and county solid waste management agencies.

9. The fourteenth policy in this plan is that "future Class I disposal sites and facilities should be located so that they do not have adverse effects on human health and safety, air and water quality, wildlife, critical environmental resources and urbanized areas." Under this policy, Action 14.1 is to develop necessary arrangements that would lead to reservation and acquisition of sites if additional disposal capacity for hazardous wastes is needed (see Action 11.3). Pending the results of Action 11.3, affected counties will be convened to determine areas for further study and develop necessary intergovernmental and public-private arrangements for financing studies, reports, public review and site(s) reservation and/or acquisition. This action is to be implemented by affected local jurisdictions (to be determined), to be assisted by ABAG, SSWMB, and the State Department of Health if requested. The item is ongoing. Costs are to be determined, and no financing mechanism is needed at this time (contingent on Action 11.3); Federal and State grants will finance Action 14.1 if it is needed.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including SSWMB, following General Assembly approval of the

initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.1 is to designate ABAG as the lead agency for the Federally required continuing planning process. ABAG would continue its functions as an environmental planning and coordinating agency. The implementing agencies for this action are ABAG, State agencies, including SSWMB, and EPA. The schedule for action is 1978, and there is no cost.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by the Metropolitan Transportation Commission, the Bay Area Air Pollution Control District, the Regional Water Quality Control Board, the State Water Resources Control Board, SSWMB, the Air Resources Board, EPA and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

STATE CLEARINGHOUSE

Solid Waste Management Plan

1. The third policy in this plan is that "the regional Solid Waste Management Plan should focus on multi-jurisdictional projects for waste reduction and recovery of materials and energy from solid waste." Action 3.1 under this policy is to review proposed resource recovery projects including large-scale waste combustion projects to ensure consistency with county and regional solid waste management and other environmental goals and standards. This action is to be implemented by EPA, the State Solid Waste Management Board, ABAG, and the State Clearinghouse (the Governor's Office of Planning and Research) on an ongoing basis. Total cost per year of \$6,000, none of which is directly attributable to this plan, is to be paid for by Federal and State funds and ABAG dues.

2. The sixteenth policy in this plan is that "facilities planning, design, and construction for wastewater solids should be accomplished by local wastewater management agencies in conformance with the county solid waste management plans, the Environmental Management Plan (208 plan), and Federal and State requirements." Action 16.2 under this policy is to review proposed facilities plan and approve those that are consistent with the regional Solid Waste Management Plan, and the 20-year project list in the "208" plan. This action is to be implemented by EPA, the State Water Resources Control Board, the Regional Water Quality Control Board, the

State Department of Health, ABAG, and the State Clearinghouse (the Governor's Office of Planning and Research) by 1979. Total cost per year is \$4,000, none of which is directly attributable to this plan, and is to be financed by Federal and State grants and local and State general funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. This action is to be implemented by ABAG and all implementing agencies, including the State Clearinghouse (the Governor's Office of Planning and Research), following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Action 1.7 under this policy is to continue the Program Review Board. ABAG and other agency officials and staff would report on plan update progress. This action is to be implemented by EPA, the State Water Resources Control Board, the Regional Water Quality Control Board, the Air Resources Board, the Governor's Office of Planning and Research, and the State Solid Waste Management Board on an ongoing basis. Its minor administrative would be financed by Federal and State grants with local match if required.

STATE AIR RESOURCES BOARD (ARB)

Solid Waste Management Plan

1. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations, including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies, including ARB, with responsibility for regulating energy recovery facilities); b) Assign a staff member knowledgeable in solid waste management to assist applicants in early identification of permit requirements (this is to be implemented by county solid waste management agencies); and c) Hold meetings prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by

or by project applicant (this is to be implemented by county solid waste management agencies or other permitting agencies, including, ARB, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of county general funds, fees and surcharges, and regulatory agencies' operating funds. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

Air Quality Management Plan

1. One group of actions in this plan is mobile source controls. The general policy here is to "reduce hydrocarbon emissions from motor vehicles." Action 3 under this policy is to implement more stringent vehicle (light duty and heavy duty) exhaust emission controls - approximately a 50 percent reduction below 1977 prescribed levels. This is to be implemented by ARB. Adoption is scheduled for 1980, with full implementation by 1990. Public cost per year is \$3,000, and private cost per year is \$24,910,000, paid for by private financing.

Also under this general policy, Action 4 is to implement a Statewide inspection/maintenance program for light and heavy duty vehicles. This is to be implemented by ARB or the State Bureau of Automotive Repair. Adoption is scheduled for 1978, with full implementation by 1985. Total public cost per year is \$1,395,000, and total private cost per year is \$16,892,000. Financing is by inspection/maintenance program revenues and the State General Fund.

Finally under the mobile source control general policy, Action 5 is to require exhaust control devices on existing heavy duty gasoline vehicles Statewide. This is to be implemented by ARB. Adoption is scheduled for 1979, with full implementation by 1985. Total public cost per year is \$8,000, and total private cost per year is \$1,534,000, paid for with private financing.

2. The last portion of this plan is titled "Other Measures." The general policy here is to "ensure maintenance of the oxidant standard beyond 1985-1987." Action 13 under this general policy is to adopt between 1985 and 1987, and implement in 1990 or thereafter, one or more of the following measures to ensure maintenance of the oxidant standard through the year 2000, subject to further evaluation of the measures during the continuing planning process: a) Reduce hydrocarbon emissions from small gasoline engines; b) Reduce hydrocarbon emissions from off-highway mobile sources; c) Implement more stringent vehicle exhaust emission controls - approximately 60-80 percent reduction below 1977 prescribed levels; and d) Provide additional transit. This action is to be implemented by ARB, the Bay Area Air Pollution Control District, ABAG, the Metropolitan Transportation Commission, and transit operators. Adoption is scheduled for 1985-87, with full implementation by 1990-95. Costs and financing are to be determined.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. This action is to be implemented by ABAG and all implementing agencies, including ARB, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.1 is to designate ABAG as the lead agency for the Federally required continuing planning process. ABAG would continue its functions as an environmental planning coordinating agency. The implementing agencies for this action are ABAG, State agencies, including ARB, and EPA. The schedule for action is 1978, and there is no cost.

Also under the first policy, Action 1.3 is to continue joint staff arrangements for air quality planning. This is to be implemented by ABAG, the Bay Area Air Pollution Control District, the Metropolitan Transportation Commission, ARB, Caltrans, and EPA through an ongoing memorandum of understanding. It has no cost.

Finally under the first policy, Action 1.7 is to continue the Program Review Board. ABAG and other agency officials and staff would report on plan update progress. This action is to be implemented by EPA, the State Water Resources Control Board, the Regional Water Quality Control Board, ARB, the Governor's Office of Planning and Research, and the State Solid Waste Management Board on an ongoing basis. Its minor administrative cost would be covered by Federal and State grants with local match if required.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under this policy is to take action on appropriate portions of the updated plan. This action is to be implemented by MTC, BAAPCD, RWQCB, SWRCB, SSWMB, ARB, EPA and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

3. The sixth policy for the Continuing Planning Process is that "regional air quality planning should be continued." Action 6.1 under this policy is to update the initial air quality plan to cover other pollutants, including but not limited to sulfur dioxide, carbon monoxide, and particulate matter. This covers the other pollutants where

potentially serious air quality problems exist in the region. The action is to be implemented by ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties by October 1978. Its undetermined cost will be paid for by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.2 is to review programs made to implement actions to reduce hydrocarbon emissions and determine if reasonable further progress is being made between 1979 and 1982 toward attainment of the Federal oxidant standard. Implementing agencies for this action are ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties. Action is scheduled for 1979 annually thereafter. The undetermined costs are to be financed by Federal and State grants with local match if required.

Also under this policy, Action 6.3 is to establish a regional industrial siting program for analyzing alternative sites, sizes, production processes and environmental control techniques. This is required by the Clean Air Act Amendments of 1977 if the region cannot attain the Federal oxidant standard by 1982 and is to be granted an extension to 1987. The action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAPCD, MTC, ARB, Caltrans, cities and counties by 1979. Its undetermined costs are to be paid for by Federal and State grants with local match if required.

Finally, Action 6.4 under the same policy is to evaluate and propose procedures other than case-by-case offset for permitting industrial growth, with consideration given to any potential competitive advantages or disadvantages to the region that could result from implementation of such procedures. The action is to be implemented by ABAG, BAAPCD, ARB, cities and counties by 1979 and annually thereafter. Its undetermined cost is to be financed by Federal and State grants with local match if required.

STATE BUREAU OF AUTOMOTIVE REPAIR

Air Quality Management Plan

1. One group of actions in this plan is mobile source controls. The general policy here is to "reduce hydrocarbon emissions from motor vehicles." Action 4 under this policy is to implement a Statewide inspection/maintenance program for light and heavy duty vehicles. This is to be implemented by ARB or the State Bureau of Automotive Repair. Adoption is scheduled for 1978, with full implementation by 1985. Total public cost per year is \$1,395,000, and total private cost per year is \$16,892,000. Financing is by inspection/maintenance program revenues and the State General Fund.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1

under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. This action is to be implemented by ABAG and all implementing agencies, including the State Bureau of Automotive Repair, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

STATE DEPARTMENT OF TRANSPORTATION (Caltrans)

Air Quality Management Plan

1. One group of actions in this plan is transportation controls. The general policy here is to "reduce motor vehicle emissions through transportation actions to reduce vehicle use." Action 9 under this general policy is to support development of high occupancy vehicle lanes and/or ramp metering on selected freeway segments when justified on an individual project basis. This action is to be implemented by Caltrans, transit districts, cities and counties. Adoption is scheduled for 1979, with full implementation by 1985. Total yearly public cost is \$7,438,000, paid for by Federal Aid Highway Programs and State High Program funds.

Also under this general policy, Action 10 is to provide more ride sharing services such as jitneys and vanpools. Objectives need to be developed and monitored to gauge the desirable rate of expansion. This action is to be implemented by Caltrans employers, and the Metropolitan Transportation Commission. The measure has been previously adopted, with full implementation by 1979. Total yearly public cost is \$300,000, financed by Federal Transportation funding.

Finally under this general policy, Action 11 is to develop more extensive and safe bicycle systems and storage facilities. Objectives need to be developed and monitored to gauge the desirable rate of expansion. This action is to be implemented by cities, counties, MTC, and Caltrans. Adoption is scheduled for 1980, with full implementation by 1985. Total public cost per year is \$438,000, financed by Federal Aid Highway Programs and Local Transportation Development Act Funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. This action is to be implemented by ABAG and all implementing agencies, including Caltrans, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update

should be based on that established for the initial Environmental Management Plan." Under this policy, Action 1.3 is to continue joint staff arrangements for air quality planning. This is to be implemented by ABAG, the Bay Area Air Pollution Control District, MTC, the Air Resources Board, Caltrans, and EPA through an ongoing memorandum of understanding. It has no cost.

2. The sixth policy for the Continuing Planning Process is that "regional air quality planning should be continued." Action 6.2 under this policy is to update the initial air quality plan to cover other pollutants, including but not limited to sulfur dioxide, carbon monoxide, and particulate matter. This covers the other pollutants where potentially serious air quality problems exist in the region. The action is to be implemented by ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties by October 1978. Its undetermined cost will be paid for by Federal and State grants with local match if required.

Also under the sixth policy, Action 6.2 is to review programs made to implement actions to reduce hydrocarbon emissions and determine if reasonable further progress is being made between 1979 and 1982 toward attainment of the Federal oxidant standard. Implementing agencies for this action are ABAG, BAAPCD, MTC, ARB, Caltrans, cities and counties. Action is scheduled for 1979 and annually thereafter. The undetermined costs are to be financed by Federal and State grants with local match if required.

Finally under this policy, Action 6.3 is to establish a regional industrial siting program for analyzing alternative sites, sizes, production processes and environmental control techniques. This is required by the Clean Air Act Amendments of 1977 if the region cannot attain the Federal oxidant standard by 1982 and is to be granted an extension to 1987. The action is to be implemented by ABAG (with Regional Planning Committee involvement), BAAPCD, MTC, ARB, Caltrans, cities and counties by 1979. Its undetermined costs are to be paid for by Federal and State with local match if required.

ACTIONS APPLICABLE TO FEDERAL AGENCIES AND THE U.S. CONGRESS

The Environmental Management Plan designates several Federal agencies to have responsibility for implementing various of its control measures. Actions are also directed to the U.S. Congress. The following list is of Federal agencies (and the U.S. Congress) that have been selected and the plans in the EMT where their implementing responsibilities are located.

- o United States Congress - Plan Implementation.
- o United States Coast Guard - Water Quality Management Plan, Plan Implementation.
- o United States Environmental Protection Agency (EPA) - Solid Waste Management Plan, Plan Implementation, Continuing Planning Process.
- o United States Department of Transportation - Water Quality Management Plan, Plan Implementation.

UNITED STATES CONGRESS

Plan Implementation

1. The second policy for Plan Implementation is that "Federal and State governments should make legislative and administrative changes to carry out Environmental Management Plan recommendations, as necessary." Action 2.5 under this policy is to enact legislation providing incentives for water conservation in existing building and for agricultural water conservation. This action supports Policy 2 and its actions in the Water Supply Management Plan. It is to be implemented by the U.S. Congress and the California Legislature as soon as possible.

Also under this policy, Action 2.6 is to enact legislation to promote waste reduction where appropriate, and the support stable, adequate markets for secondary materials and products made from them. This action supports Policies 6 and 8 of the Solid Waste Management Plan. It is to be implemented by the U.S. Congress and the California Legislature as soon as possible.

Also under the second policy, Action 2.7 is to provide increased financial support for job retraining programs for workers displaced by new air quality stationary source control. This action supports Policy 1 in the Air Quality Management Plan. It is to be implemented by the U.S. Congress and the California Legislature during the 1979-81 session.

Action 2.10 under the same policy is to provide additional financial support for local transit operators to substantially increase regional transit service as a means of achieving Federal and State air quality standards. This action supports Policy 3 in the Air Quality Management Plan. It is to be implemented by the U.S. Congress and the California Legislature during the 1979-81 session.

Also under the second policy, Action 2.11 states the following: "The ABAG Environmental Management Plan has met stringent standards for air quality. It is possible there may be significant economic and social adjustments. Therefore we request Congress to re-examine the no-risk philosophy and requirements of the Clean Air Act to make them reasonable for local governments seeking to comply." This action is to be implemented by the U.S. Congress during the 1979-81 session.

Finally under the second policy, Action 2.12 is to provide necessary funding for local government agencies to carry out regulations and programs outlined in this Plan. This recommendation supports the capacity of local government to carry on the Environmental Management Plan. This action is to be implemented by the California Legislature, U.S. Congress, and local government based upon future income sources. Implementation is scheduled on an as needed basis. Costs are not applicable. Financing mechanisms are Federal and State budgets and local taxing authority and fee setting or assessment ability.

UNITED STATES COAST GUARD

Water Quality Management Plan

1. The tenth policy in this plan is to "reduce sewage pollution from vessels, including houseboats, in the Bay-Delta system." Action 10.3 under this policy is to inform the boating public of marine sanitation device programs. This involves providing information on types of devices, matching shoreside facilities, schedules, procedures and costs. It is to be implemented by the Regional Water Quality Control Board and the United States Coast Guard in 1978 and 1979. Total cost per year is \$5,000, paid for out of State appropriation and Federal program funds.

2. The twelfth policy in this plan is to "monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in the Bay Area." Action 12.5 under this policy is to reevaluate the need to upgrade the vessel traffic system in the Carquinez Strait and North San Pablo Bay. A report would be prepared examining the addition of high-resolution radar coverage to the subject area. This action is to be implemented by the United States Coast Guard by June 1979. Total cost of the action is \$1,000, financed by Federal funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. This action is to be implemented by ABAG and all implementing agencies, including the United States Coast Guard, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)

Solid Waste Management Plan

1. ... The third policy in this plan is that "the regional Solid Waste Management Plan should focus on multi-jurisdictional projects for waste reduction and recovery of materials and energy from solid waste." Action 3.1 under this policy is to review proposed resource recovery projects including large-scale waste combustion projects to ensure consistency with county and regional solid waste management and other environmental goals and standards. The action is to be implemented by EPA, the State Solid Waste Management Board, ABAG, and the State Clearinghouse on an ongoing basis. The total annual cost is \$6,000, paid for by Federal and State funds and ABAG dues.

Also under the third policy, Action 3.2 is to develop additional information that would lead to construction of a network of new resource recovery facilities through studies and demonstration projects, such as: a) Air quality, water quality, and other environmental effects of large scale energy recovery systems; b) The impasse between overall long-term environmental benefits of waste-to-energy systems and air quality regulations; c) Technical feasibility as well as financial and social impacts of resource recovery projects; d) Size and location of potential markets for the resources that are to be recovered; e) Cost and energy requirements for source separated and mechanically separated materials; and f) Feasibility of cooperative arrangements among community recycling programs for transportation, warehousing, and marketing. The action is to be implemented by EPA, SSWMB in conjunction with cities, counties and ABAG, by 1982. The total cost is \$11,300,000, none of which is directly attributable to this plan, and is to be paid for by Federal and State funds, and by State Senate Bill 650 (1977).

2. The fifth policy in this plan is that "where possible, the existing permit process should be improved to facilitate the implementation of large-scale energy recovery projects." Action 5.1 under this policy is to incorporate methods into the existing permit process for large-scale energy recovery facilities to make it more efficient and convenient. Regulatory agencies should assist applicants for large-scale energy recovery facilities by the following means: a) Clarify existing regulations, including time limits for review and comments, and adopt new ones where necessary (this is to be implemented by all permitting agencies with responsibility for regulating energy recovery facilities, including EPA); b) Assign a staff member knowledgeable in solid waste management to assist applicant in early identification of permit requirements (this is to be implemented by county solid waste management agencies) and c) Hold meeting prior to public hearing for discussion of project-related issues - to be initiated by any of the regulatory agencies or by project applicant (this is to be implemented by county solid waste management agencies or other permitting agencies, including EPA, as appropriate, or ABAG, as requested). This is to be an ongoing action. The cost per year is \$5,500, paid for out of county general funds, fees and surcharges, and

regulatory agencies' operating funds. One general agreement to cover all aspects of the approved permit coordination system will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate.

3. The twelfth policy in this plan is that "hazardous industrial waste reduction, source separation, and recovery should be promoted in the interest of limiting land disposal." Under this policy, Action 1.2 is to encourage hazardous waste resource recovery. This involves providing incentives to industry for resource recovery such as: a) Low interest loans for new equipment (implemented by the State Department of Health and SSWMB); b) A Statewide waste exchange and marketing system (implemented by the State Department of Health); c) Information dissemination through business associations (implemented by ABAG and the State Department of Health); and d) Guidance to industry on reusing waste (implemented by the State Department of Health); and e) Charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment (implemented by the State Department of Health and county solid waste management agencies). Overall implementation is also joined by EPA. All items are ongoing. The total cost per year of this action is \$18,000, which is to be financed by the Federal Resource Conservation and Recovery Act, the California Pollution Control Financing Authority, and State funds. Agreements are to be negotiated between ABAG, the State Department of Health, SSWMB, and the county solid waste management agencies.

4. The thirteenth policy in this plan is that "regulations should ensure safe and proper handling of hazardous wastes." Action 13.1 under this policy is to enforce proper labeling requirements. This involves requiring that containers used for storage, transport, or disposal of hazardous waste accurately identify their contents. This action is to be implemented by EPA and the State Department of Health on an ongoing basis. It has no cost.

Also under this policy, Action 13.2 is to enforce adequate storage facilities requirements. This involves requiring that containers used for on-site storage for transport and for disposal be made of proper materials and designed so as to minimize the hazards of leaking or breaking. This action is to be implemented by EPA and the State Department of Health on an ongoing basis. It is without cost.

Also under the thirteenth policy, Action 13.3 is to enforce requirements for adequate record-keeping practices by waste generators. This involves requiring that record-keeping practices accurately identify the type and the quantity of hazardous waste generated. This action is to be implemented by EPA and the State Department of Health. It is without cost.

Finally under the thirteenth policy, Action 13.4 is to improve procedures for preventing and handling spills of hazardous wastes. This involves: a) Evaluating preventive measures for oil and chemical spills on land and recommend improvements as appropriate (implemented by appropriate

Federal, State regional and local agencies, including EPA); b) Providing for training of firefighters in proper procedures for handling oil spills in County Emergency Services Plan (implemented by County Offices of Emergency Services); and c) Designating a single responsible agency for each county for notification and handling of spills, such as the County Office of Emergency Services or the County Health Department (implemented by the county and cities for each county). All items are on an ongoing basis. The total cost of the action is \$14,000, paid for out of Federal, State and local funds.

5. The sixteenth policy in this plan is that "facilities planning, design and construction for wastewater solids management should be accomplished by local wastewater management agencies in conformance with the County Solid Waste Management Plans, the Environmental Management Plan (208 plan), and Federal and State requirements. Under this policy, Action 16.2 is to review proposed facilities plans and approve those that are consistent with the regional Solid Waste Management Plan and the 20-year project list in the 208 plan. This action is to be implemented by EPA, the State Water Resources Control Board, the Regional Water Quality Control Board, the State Department of Health, ABAG, and the State Clearinghouse by 1979. The total annual cost of the action, none of which is directly attributable to this plan, is \$4,000, with financing by Federal and State grants, and local and State general funds.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including EPA, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

Continuing Planning Process

1. The first policy for the Continuing Planning Process is that "the process for continued environmental management planning and plan update should be based on that established for the initial Environmental Management Plan." Action 1.1 under this policy is to designate ABAG as the lead agency for the Federally required continuing planning process. ABAG would continue its functions as an environmental planning and co-ordinating agency. The implementing agencies for this action are ABAG, State agencies and EPA, and the schedule for action is 1978. There is no cost.

Also under the first policy, Action 1.3 is to continue joing staff arrangements for air quality planning. This is to be implemented by ABAG, the Bay Area Air Pollution Control District, the Metropolitan Transportation Commission, the Air Resources Board, Caltrans, and EPA through an ongoing memorandum of understanding. It has no cost.

Finally under the first policy, Action 1.7 is to continue the Program Review Board. ABAG and other agency officials and staff would report on plan update progress. This action is to be implemented by EPA, the State Water Resources Control Board, the Regional Water Quality Control Board, ARB, the Governor's Office of Planning and Research, and the State Solid Waste Management Board on an ongoing basis. Its minor administrative cost would be covered by Federal and State grants with local match if required.

2. The second policy for the Continuing Planning Process is that "the major purpose of the continuing planning process should be the yearly update of the Environmental Management Plan." Action 2.3 under that policy is to take action on appropriate portions of the updated plan. This action is to be implemented by MTC, BAAPCD, RWQCB, SWRCB, SSWMB, ARB, EPA, and the State Department of Health on a yearly basis starting in 1979. Its undetermined costs are paid for out of Federal and State budgets.

UNITED STATES DEPARTMENT OF TRANSPORTATION

Water Quality Management Plan

1. The twelfth policy in this plan is to "monitor effectiveness of existing arrangement for preventing and dealing with oil and chemical spills in the Bay Area." Action 12.7 under this policy is to promulgate final Federal regulations proposing improvements in requirements for navigational aids and tanker construction. Proposed Department of Transportation standards issued on May 13, 1977 include: a) Double bottoms on new large tankers; b) Segregated ballast on new large tankers; c) Inert gas systems on all crude oil tankers; d) Backup radar systems with collision avoidance equipment on all large tankers; and e) Improved emergency steering standards for all tankers. This action is to be implemented by the United States Department of Transportation and the U.S. Congress on an ongoing basis. Costs are undetermined; if proposed standards are finalized, the initial construction cost to bring U.S. vessels up to standards is estimated to be \$120,000,000. Financing of the action is by local funds supplemented by State and Federal grants.

Plan Implementation

1. The third policy for Plan Implementation is that "plan implementation should be ensured through the timely and appropriate completion of management agreements as required by Federal regulations." Action 3.1 under this policy is to obtain management agreements to implement the policies and actions of appropriate portions of the Environmental Management Plan. The action is to be implemented by ABAG and all implementing agencies, including the United States Department of Transportation, following General Assembly approval of the initial plan. Its undetermined costs will be paid for by Federal and State grants with local match if required.

ACTIONS APPLICABLE TO PRIVATE INDUSTRY AND OTHER NON-GOVERNMENTAL AUTHORITIES

Several of the policies and actions in the Environmental Management Plan are to be implemented by private industry and other organizations, including individual citizens and homeowners. In this chapter, these are listed by management plan.

Water Quality Management Plan

1. The fourth policy in this plan is to "ensure that water pollution facilities or measures effectively protect water quality." Action 4.2 under this policy is to monitor the performance of municipal and industrial wastewater systems in accordance with monitoring requirements. This action is to be implemented by sewerage agencies and individual private companies on a continuous basis. Its undetermined costs, none of which are directly attributable to this plan, are to be paid for by local and private funds.
2. The ninth policy in this plan is to "provide facilities needed for industrial wastewater treatment and disposal and water quality protection." Action 9.1 under this policy is to expand existing and provide new facilities for treatment and disposal of industrial wastes discharged directly to receiving waters. Direct industrial discharges that may have to be treated to a higher degree than at present are listed in Section K of the Water Quality Management Plan. This action is to be implemented by individual private companies on a schedule listed in Section K. Costs will be at least \$25,000,000 to \$50,000,000, none of which are attributable to this plan. Financing is by private funds, including available low-interest rate loans authorized by the California Pollution Control Financing Authority.

Also under the ninth policy, Action 9.3 is to expand existing and provide new facilities for pretreatment of industrial wastewaters discharged to municipal sewer systems. Only that degree of treatment necessary to meet the municipalities discharge requirements is recommended at this time. This action is to be implemented by individual private companies on a continuous basis. Costs are undetermined. If all indirect dischargers had to treat to the same level as direct dischargers, the cost would be \$15,000,000. Financing is by private funds, with low-interest rate loans available.

3. The tenth policy in this plan is to "reduce sewage pollution from vessels, including houseboats, in the Bay-Delta system." Action 10.4 under this policy is for all marinas and harbors to provide vessel holding tank pumpout facilities. This action is to be implemented by marina/harbor owners by January 1980. Total cost is \$500,000. Financing is by owners using local and private funds in addition to the State Department of Navigation and Ocean Development (DNOD) funds.

Also under the tenth policy, Action 10.5 is for all marinas and harbors to provide on-shore toilet facilities. This is for marinas, harbors and boats launch areas. Most appear to have adequate facilities, but there are some exceptions. This is to be implemented by marina/harbor/launch area owners by January 1980. The action's undetermined costs are to be paid for by local and private funds, including loans and grants from the State Department of Navigation and Ocean Development (DNOD).

4. The eleventh policy in this plan is to "improve wastewater disposal practices in unsewered areas." Action 11.5 under this policy is to promote research of on-site disposal systems. To improve on-site systems, this action involves the development of new design and construction criteria and the development of new systems. It is to be implemented by the Governor's Office of Appropriate Technology and private industry on an ongoing basis. Costs are undetermined, with financing by State funds, perhaps Federal subsidies, and private funds.

5. The twelfth policy in this plan is to "monitor effectiveness of existing arrangements for preventing and dealing with oil and chemical spills in the Bay Area." Action 12.3 under this policy is to investigate cleanup and preventive measures for inland spills of all potentially hazardous or toxic chemicals in the Bay Area and make recommendations for improvement. A one time study of inland spill prevention and cleanup activities and responsibilities is involved. Further action will depend on the results of this study. This action is to be implemented by an independent consultant hired by ABAG. The schedule for action is October 1979. Total cost of the study is \$50,000 for one year, to be paid for by Federal "208" funds.

Water Supply Management Plan

1. The second policy in this plan is to "encourage water saving." Action 2.1 under this policy is to implement residential water savings programs in existing developments including homes, businesses, industries and recreational areas. "Moderate" residential water savings programs emphasizing retrofit of water saving devices are recommended. 5-10 percent savings can be achieved in this way. This action is to be implemented by water supply agencies, homeowners and private companies by December 1978. Total cost per year is \$1,420,000, financed by user charges and private funds.

Also under this policy, Action 2.2 is to implement water savings programs in new developments, including homes, businesses, industries and recreational areas. "Moderate" water savings programs emphasizing the building-in of devices into new construction are recommended. 10-20 percent savings can be achieved in this way. This action is to be implemented by water supply agencies, developers, private companies and public institutions by December 1978. Total cost is included above in Action 2.1. Financing is by user charges and private funds.

Also under the second policy, Action 2.3 is to revise and update building codes to include water saving devices in new construction. This is to be implemented by cities, counties and the International Conference of Building Officials. The schedule is continuous from December 1978. Costs are undetermined and are to be paid for by city and county funds.

Finally under the second policy, Action 2.6 is to make public as economically as possible data on annual water use and conservation in the region. This is to be implemented by the Water Resource Management Coordinating Committee (WMCC), water agencies, the State Department of Water Resources, and media on an annual basis. Costs are undetermined.

Solid Waste Management Plan

1. The tenth policy in this plan is that "all levels of governments should encourage development of source separation programs where appropriate." Action 10.3 under this policy is to establish office paper recycling programs. Data and experience of the public agency programs would be used to expand recycling into the private sector. This action is to be implemented by ABAG and other regional agencies, local governments and the private sector. The schedule for action is May 1978 for ABAG. Total cost is \$45,000, financed by sales of used paper.

Air Quality Management Plan

1. The third group of actions in this plan is for Transportation Controls. The general policy here is to "reduce motor vehicle emissions through transportation actions to reduce vehicle use." Action 7 under this policy is for preferential parking for carpools and vanpools. This is to be implemented by cities, counties, employers, and the Metropolitan Transportation Commission. Adoption is scheduled for 1978, with full implementation by 1985. Total cost per year is \$886,000, with financing by Federal Aid Highway programs and Local Transportation Development Act funds.

Also under the Transportation Controls, Action 10 is to provide more ride sharing services such as jitneys and vanpools. Objectives need to be developed and monitored to gauge the desirable rate of expansion. This is to be implemented by Caltrans, employers and MTC, will full implementation by 1979. The total annual cost of \$300,000 is to be paid for out of Federal Transportation funding.

Chapter III

FEDERAL AND

STATE REQUIREMENTS

In addition to requiring the preparation of an areawide waste treatment management plan, Section 208 of the Federal Water Pollution Control Act Amendments of 1972 specifies which water pollution problems are to be addressed by the plan. In other words, the substantive nature of the plan is specified by the act (and EPA regulations implementing the act). Similarly the Clean Air Act Amendments of 1977 (and EPA regulations applicable to implementing that act) provide certain requirements for an air quality plan. The solid waste portion of the Environmental Management Plan is prepared under several Federal and State laws. This chapter of Volume II of the EMP indicates how the requirements of these Federal and State laws and regulations are met by the plan.

WATER QUALITY REQUIREMENTS UNDER SECTION 208 OF THE FEDERAL WATER POLLUTION CONTROL ACT

Detailed requirements are included in the act and summarized in EPA regulations, specifically section 131.11 of Volume 40 of the Code of Federal Regulations, Part 130.

This section describes how the plan content compares with the Federal requirements.

a. Planning boundaries

Planning boundaries are shown in Figure I of Chapter I of the EMP, Volume I. Areas requiring Section 201 facilities planning studies are included in the twenty-year project list. Locations of water quality and effluent limitation segments and significant dischargers remain the same as in the Basin Plan. Locations of monitoring stations are also shown in the basin plan. The EMP recommends consideration of formation of a centralized regional water quality monitoring and research organization (Water Quality Action 1.2). In addition, the SWRCB is proposing a regional monitoring program.

b. Water quality assessment and segment classifications

Water quality assessment was undertaken using two mathematical water quality simulation models - the link-node model and a finite element model. Both dry weather and wet weather conditions were modeled. Results are described in:

Water Quality Technical Memorandum 19, Preliminary S.F. Bay Modeling Results, June 1977

Water Quality Technical Memorandum 21, Further S.F. Bay Modeling Results, July 1977

Water Quality Technical Memorandum 23, Modeling Results-II, August 1977

Assessment of Potential Impacts of Non-Point Source Loads on Shellfish Resources. Resource Management Associates, November 1977

Detailed Modeling of Special Study Areas. Resource Management Associates, December 1977.

Segment classifications as defined in the Basin Plan were reviewed in the light of the water quality assessment. No changes are recommended. Classifications are included in Section H of the Water Quality Plan.

c. Inventories and projections

Results are described in:

Revised Series 3 Projections, March 15, 1978.

Water Quality Technical Memorandum 15, Estimated Municipal and Non-discrete Industrial Wastewater Loads in the San Francisco Bay Region, June 1977.

Water Quality Technical Memorandum 30, Estimated Municipal and Non-discrete Industrial Wastewater Loads as Affected by Various Population Projections, January 1978.

d. Nonpoint source assessment

The nonpoint source was completed with the help of two different mathematical models: the Microscopic Planning Model (MAC) and the Storm Water Management Model (SWMM). MAC was applied to 59 major watersheds, which were subdivided into three types of subareas: (1) natural or protected areas, synonymous with background loads, (2) potentially developable areas where preventive measures (ordinances and planning controls) may have the greatest impact, and (3) existing urban areas where remedial measures may have the greatest impact. SWMM was applied to 13 demonstration watersheds for more detailed assessment of nonpoint source pollution and effect of mitigation measures. Both models were calibrated using locally collected samples (600 samples from 55 storm events, each analyzed for up to 27 different quality parameters). A key element in nonpoint source pollutants assessment was the direct involvement (both modeling and monitoring) of the local County Lead Agencies. The results are published in eight individual county reports summarized in the EMP, Vol. I. The intermediate results were published in a series of Surface Runoff Technical Memoranda and Briefs to EMTF.

e. Water quality standards

Water quality objectives as defined in the Basin Plan were reviewed. No changes are recommended with the exception of an addition to the standards for delta outflow. Results are described in:

Brief to EMTF, Future Water Quality and Pollution Problems, June 1977.

The Effect of Delta Outflow on Density Stratification in San Francisco Bay, Hugo B. Fischer, Inc. Waterfront Design Associates, June 1977.

Water Quality Technical Memorandum 28, Recommendations on Maintenance of Outflow Rates from the Sacramento-San Joaquin Delta, November 1977.

f. Total maximum daily loads

The technical limitations of the analytical tools available to estimate the assimilative capacity of water quality segments are such that it was concluded that it would not be useful to attempt to estimate total maximum daily loads. The most significant water quality limited segment in the region is the extreme South Bay. The basin plan recommends that municipal and industrial discharges be eliminated in this segment. This recommendation remains controversial. A major discharger to the segment is currently undertaking a detailed analysis of

waste assimilation in the segment. If an attempt is to be made to establish a total maximum daily load it should be deferred until this analysis is complete.

g. Point source load allocations

Because total maximum daily loads were not estimated, a point source load allocation was not carried out.

h. Municipal waste treatment system needs

Municipal waste treatment system needs are shown in the twenty-year project list in the draft EMP, Volume I.

i. Industrial waste treatment system needs

Industrial waste treatment system needs are not directly related to water quality via waste load allocations. The needs are simply to meet the Federal effluent limitations. Significant direct industrial discharges are identified in Section K of Chapter III of the EMP. All dischargers meet the 1977 best practicable treatment requirement. Most will need further treatment facilities to meet the 1983 or 1984 best available treatment requirement.

j. Nonpoint source control needs

Control needs for nonpoint sources are described in:

- i Agriculture - Nine individual surface runoff plans
- ii Silviculture - Determined not to be significant in planning area
- iii Mining - Water Quality Technical Memorandum 17 Significance of Pollution Problems Resulting from Extraction of Mineral Resources
- iv Construction Activities - Nine individual surface runoff plans
- v Land Disposal Affecting Water Quality - Determined not to be significant in region
- vi Hydrologic Modifications - The Effect of Delta Outflow on Density Stratification in San Francisco Bay, Fischer-Waterfront Design Associates, June 1977; Effects of Delta Outflow on San Francisco Bay System, J.B. Gilbert and Associates, October 1977; and Water Quality Technical Memorandum 28 Recommendation on Maintenance of Outflow Rates from Sacramento-San Joaquin Delta is EMP Continuing Planning Process Action 3.2.

k. Residual Waste Control Needs

Residual waste control needs and land disposal needs are included in the solid waste management Chapter of EMP Volume I. Results of the San Francisco Bay Region Wastewater Solids Study are also included by reference in the same Chapter.

In addition to the existing documentation, identification of the necessary controls is described in nine solid waste technical memoranda:

Solid Waste Technical Memorandum 1, Status of Existing Landfill Sites in the San Francisco Bay Region, March 1977.

Solid Waste Technical Memorandum 2, Existing Authorities for Hazardous Waste Management, April 1977.

Solid Waste Technical Memorandum 3, Action Program to Reduce Waste Generation and to Promote Source Separation and Recycling in the Bay Area, April 1977.

Solid Waste Technical Memorandum 4, Issues in Current Permit Approval System for Solid Waste Management Facilities and Disposal Sites, April 1977.

Solid Waste Technical Memorandum 5, Existing Practices for Hazardous Waste Management in the San Francisco Bay Area, May 1977.

Solid Waste Technical Memorandum 6, Current and Projected Quantities of Hazardous Industrial Wastes Produced in the San Francisco Bay Area, June 1977.

Solid Waste Technical Memorandum 7, Identification of Possible Class I Site Areas, July 1977.

Solid Waste Technical Memorandum 8, Elements of a Coordinated Permit Approval Process for Solid Waste Management Sites and Facilities, July 1977.

Solid Waste Technical Memorandum 9, Issues for Federal and State Legislative and Administrative Action to Promote Source Reduction and Resource Recovery from Solid Waste, August 1977.

1. Urban and industrial stormwater system needs

Facilities needed to control pollution from combined urban stormwater and sewage collection systems are included in the twenty-year project list in the draft EMP Volume I. Facilities or measures needed to control pollution from separate stormwater collection facilities are described in the individual county surface runoff control plans.

m. Target abatement dates

Schedule for needed facilities construction is included in twenty-year project list.

n. Regulatory programs

Water quality laws and regulations that affect the Bay Area have been inventoried and analyzed for their adequacy in meeting all planning requirements. The institutional framework having responsibility for implementing and enforcing these laws and regulations was also reviewed.

For each action in the Water Quality Chapter of the Environmental Management Plan, the legal authority to undertake that action is listed. Regulatory/enforcement agencies are also identified.

o. Management agencies

Designations are described in Section E of the Water Quality Chapter of the EMP. Agencies responsible for implementing each recommended action are identified in the recommendation tables throughout the EMP Volume I.

p. Environment, social and economic impact

The overall environmental, social and economic perspective of the plan is described in Chapter II of the EMP Volume I. The impacts of individual recommended actions are identified in the recommendation tables throughout the draft EMP Volume I. An assessment, of significant environmental impacts under the California Environmental Quality Act is included in the first chapter of this Volume - the Environmental Impact Report.

Residual waste control needs and land disposal needs are included in the solid waste management Chapter of EMP Volume I. Results of the San Francisco Bay Region Wastewater Solids Study are also included by reference in the same Chapter.

In addition to the existing documentation, identification of the necessary controls is described in nine solid waste technical memoranda:

Solid Waste Technical Memorandum 1, Status of Existing Landfill Sites in the San Francisco Bay Region, March 1977.

Solid Waste Technical Memorandum 2, Existing Authorities for Hazardous Waste Management, April 1977.

Solid Waste Technical Memorandum 3, Action Program to Reduce Waste Generation and to Promote Source Separation and Recycling in the Bay Area, April 1977.

Solid Waste Technical Memorandum 4, Issues in Current Permit Approval System for Solid Waste Management Facilities and Disposal Sites, April 1977.

Solid Waste Technical Memorandum 5, Existing Practices for Hazardous Waste Management in the San Francisco Bay Area, May 1977.

Solid Waste Technical Memorandum 6, Current and Projected Quantities of Hazardous Industrial Wastes Produced in the San Francisco Bay Area, June 1977.

Solid Waste Technical Memorandum 7, Identification of Possible Class I Site Areas, July 1977.

Solid Waste Technical Memorandum 8, Elements of a Coordinated Permit Approval Process for Solid Waste Management Sites and Facilities, July 1977.

Solid Waste Technical Memorandum 9, Issues for Federal and State Legislative and Administrative Action to Promote Source Reduction and Resource Recovery from Solid Waste, August 1977.

1. Urban and industrial stormwater system needs

Facilities needed to control pollution from combined urban stormwater and sewage collection systems are included in the twenty-year project list in the draft EMP Volume I. Facilities or measures needed to control pollution from separate stormwater collection facilities are described in the individual county surface runoff control plans.

m. Target abatement dates

Schedule for needed facilities construction is included in twenty-year project list.

n. Regulatory programs

Water quality laws and regulations that affect the Bay Area have been inventoried and analyzed for their adequacy in meeting all planning requirements. The institutional framework having responsibility for implementing and enforcing these laws and regulations was also reviewed.

For each action in the Water Quality Chapter of the Environmental Management Plan, the legal authority to undertake that action is listed. Regulatory/enforcement agencies are also identified.

o. Management agencies

Designations are described in Section E of the Water Quality Chapter of the EMP. Agencies responsible for implementing each recommended action are identified in the recommendation tables throughout the EMP Volume I.

p. Environment, social and economic impact

The overall environmental, social and economic perspective of the plan is described in Chapter II of the EMP Volume I. The impacts of individual recommended actions are identified in the recommendation tables throughout the draft EMP Volume I. An assessment, of significant environmental impacts under the California Environmental Quality Act is included in the first chapter of this Volume - the Environmental Impact Report.

SOLID WASTE REQUIREMENTS

The solid waste management plan meets section 208 requirements of residual waste control needs and land disposal needs. It identifies the necessary controls to be established over the disposal of pollutants on land to protect ground and surface water quality.

The plan recommends that the California Regional Water Quality Control Boards should speed up the adoption and updating of the Waste Discharge Requirements for landfill disposal sites, and that the California State Solid Waste Management Board and county enforcement agencies should issue and enforce permits for solid waste management facilities and disposal sites as required by existing State laws.

The plan is also consistent with the Federal Resource Conservation and Recovery Act of 1976, the California Solid Waste Management and Resource Recovery Act of 1972, and other Federal and State laws by recommending the following:

- Carry out county solid waste management plans.
- Support studies and demonstration projects of material and energy recovery from wastes.
- Advocate Federal, State and local action to promote waste reduction and resource recovery.
- Construct facilities for the handling and beneficial use of wastewater solids (sewage sludge).

AIR QUALITY REQUIREMENTS

Key Air Quality Maintenance Plan requirements are covered in Volume 41, Number 86 of the Federal Register, May 3, 1976.

a. Analysis Period (s.51.42)

The time period analyzed must be at least 20 years. The time period used for the Environmental Management Plan is for the period that ends in the year 2000.

b. Projection of Emissions (s.51.44)

Emission projection requirements are satisfied by Section D of Chapter VI of the EMP, Volume I.

c. Allocation of Emissions (s.51.45)

Allocation of emissions are also covered by Section D of Chapter VI of the EMP, Volume I.

d. Projected air quality concentration (s.51.46)

Air quality concentrations were projected for photochemical oxidant only, with sulfur dioxide and particulate concentration projections deferred to the continuing planning process, described in Section J of Chapter VI of Volume I of the EMP.

e. Data Sources of Growth and Development Projections (s.51.47)

The Air Quality Management Plan is designed to accommodate the range of population growth that might be reasonably expected through the year 2000 in the region. Growth projections are documented in the Revised Series 3 Projections, March 15, 1978.

f. Data Base (s.51.48)

Air quality data used are cited in Section D of Chapter VI of the EMP. Applicable air quality data collected was considered in developing the baseline air quality for the analysis, and is discussed in Section D of the air quality chapter.

g. Description of Techniques (s.51.49)

Techniques for the air quality chapter are described in Chapter VI of the EMP, and are also documented in 24 technical memoranda and three issue papers, which are listed in Section K of Chapter VI of the EMP.

h. Accuracy Factors (s.51.50)

Accuracy Factors are discussed in the technical memoranda and Section M of Chapter VI of the EMP--"Results of the LIRAQ Emissions Sensitivity Analysis".

i. Submittal of Calculations (s.51.51)

Calculations are included in the Chapter VI and the technical memoranda.

Other legal requirements (s.51.52 through 51.60) are satisfied through the measures to attain and maintain the Federal standard for photochemical oxidant. Numerical attainment of the oxidant standard should be achieved by carrying out the measures recommended according to the implementation schedule included in the plan. During the continuing planning process, the same requirements would be met for measures to achieve and maintain the other air quality standards.

It is also important to note the requirements of Section 172 (a) of the Clean Air Act Amendments of 1977 (P.L. 95-95). These requirements, and how the draft AQMP was designed to meet them some of them, are discussed in Section H of Chapter VI of the EMP, pages VI-149 and VI-150.

PUBLIC PARTICIPATION REQUIREMENTS

This section describes public participation in the development and implementation of the plan.

I. ORGANIZATION AND ACTIVITIES OF THE PUBLIC PARTICIPATION PROGRAM

A. Establishment of the Areawide Policy Advisory Committee and Development of the Work Program.

The Areawide Committee (Environmental Management Task Force - EMTF) was created incorporating representatives of local government, the major affected regional agencies, and 13 target interest groups who would be most affected by the Plan and whose participation was therefore particularly sought. This third group included persons from organizations representing business, labor, ethnic minorities, good government, conservation, housing, agriculture and the elderly.

Upon its creation, the EMTF reviewed and revised the work program for the entire environmental management plan including the public participation program. The basic public participation program, as defined by the task force, was specifically designed to involve local government officials, special interest groups and the general public during the major phases of preparation, review, and approval of the environmental management plan. The program was designed to work with both regionwide organizations and to establish contacts and encourage participation by community groups in each of the 9 Bay Area counties. Part of the county participation work was to be aided by passing through portions of the public participation funds to each of the county lead agencies to conduct public participation programs in their counties in connection with preparation of the Surface Runoff Plan.

B. Participation in Preparation of the EMP.

1. During the first year, the public could participate in preparing the plan through several channels, all under the overall aegis of the EMTF.

a. Nine open membership advisory committees reviewed and made suggestions for preparing each facet of the plan; Surface Runoff & Other Nonpoint Source Management Plans, Air Quality Maintenance Plan, Municipal/Industrial Dischargers Management Plan, Solid Waste Management Plan, Special Studies Advisory Committee, Water Conservation, Reuse, and Supply, Assessment, Projections, and Lead Agency Coordination. Comments by committee members on all major staff reports were recorded and answered as a part of all reports to the EMTF.

- b. Direct contact with local elected and appointed officials, citizen groups and media in all parts of the region was initiated to explain and build interest in the environmental management plan. Periodic reports were made to boards of supervisors and city councils, mayors' conferences, city managers' associations, planning directors and public works directors. Individual interviews were scheduled with key local elected officials and staff. A plan approval process was defined, debated, and approved as a result of these meetings that provides for a direct vote on the final proposed plan by each member jurisdiction at a special ABAG General Assembly in April 1978. Additionally, a working committee representing county administrators and city managers from each part of the Bay Area was established to work with ABAG staff in preparing and reviewing the plan.
- c. Contact with citizen groups throughout the region built another base of interest in the plan. The contact list of the individuals and organizations in the nine counties grew from 300 in July 1976 to more than 5,000 by the time the progress report on findings and proposals was released for comment in September 1977. Task force members met at roundtable discussions with citizens in each county twice during the first year to report progress and gather information for use in pending decisions facing them during plan preparation. The roundtable meetings involved 300 to 350 each time and produced specific recommendations which were accepted by the task force for incorporation in the plan.
- d. Media contacts were made to introduce the environmental management plan, explain ABAG, and build interest in the program. The early meetings received advanced media coverage in newspapers, radio and television. Key environmental and political writers were identified as a special high profile group to receive all EMTF agendas and many of the written materials. A special effort was made to identify ethnic minority media and newsletters published by special interest groups who should receive news releases, major reports and meeting notices.
- e. Through its Citizen Alliance program, ABAG supported citizen conferences focused the plan during the first year. These group meetings were intended to highlight environmental problems, the plan and planning process, and the consequences for specific groups and concerns. An estimated 900 persons participated in those meetings during that first year.

- f. Lead agencies in each county undertook a variety of programs in their respective areas including creation of both citizen and technical advisory committees, publication of their own special reports, workshops, and hearings of their own.
- g. Regular reports to a regional audience on the plan were made through Bay View, the ABAG newsletter and three special tabloid-format reports to describe the plan and its progress to date.
- h. Questionnaires were placed in depository libraries, distributed at meetings, and published in tabloids. An estimated 250 responses were received and forwarded to the task force for use in preparing the plan.

By the time the findings and proposals for the plan were prepared in September 1977, an estimated 1,000 persons and organizations had participated directly in preparing the draft. Another 15,000 had received information about the plan through direct mailings and meetings. It's not possible to estimate the number who have learned about the plan through the news media.

C. Program Evaluation.

The public participation program has been reviewed and adjusted several times during the year. Evaluation has been conducted through staff reviews at the end of each phase of the program; presentations to the EMTF Public Participation Committee, to the ABAG Citizen Services Committee and to the advisory Program Review Board; discussions with task force members; discussions with and questionnaires from the public at meetings.

Some of the results of these reviews were a stronger emphasis on the news media; a decision to produce a Sunday newspaper supplement if funding could be arranged; changing the location of certain public meetings; adding special briefings for local government officials and staff; translating meeting notices and a plan summary into Spanish and Cantonese; contacting county councils on aging, county human relations commissions and a variety of service clubs; and providing expanded support for more organizations who wanted to put on their own programs to discuss the plan.

II. RESULTS FROM PUBLIC PARTICIPATION

A. July 1976 through September 1977.

- 1. The EMTF has met regularly with high attendance, very strong interest, and guided every step in preparation of the environmental management plan. Many groups have set up support committees to guide and assist their representatives on the task force in their work.

2. Advisory committee comments have been responded to and incorporated in reports; or else specific statements have been made explaining why recommendations could not be incorporated.
3. The population, job, and land development projections for the study have been built on a combination of regional totals allocated in accordance with local development policies which were prepared in combination with local government staff.
4. County round-table meetings and individual questionnaires and letters identified some specific concerns for the plan.

In the Fall of 1976 the criteria for later evaluation of plan recommendations was discussed at the county round-tables. A number of changes were recommended which, taken together with comments from the Assessment Advisory Committee, resulted in extensive revision of the criteria which will be used to evaluate the recommendations. The Fall and Spring county round-tables prepared a series of recommendations for the plan, most of which have been incorporated as described in the following section.

Comments from Public Discussion

Public discussions included individual and joint meetings with officials, group discussions, and responses to questionnaires. These views were added to the results of the county round-tables in the Fall of 1976 and Spring of 1977. At those two periods, members of the task force held round-table discussions in each county to build interest in the program and to obtain ideas and opinions to be built into the plan while the studies were still underway and the plan not yet drafted. The responses from those meetings, together with information from meetings with officials, group discussions, letters, and questionnaire responses led to five major findings for the plan.

1. Finding - The plan must address basic causes of pollution and stress smaller scale solutions and recycling. Large scale after-the-fact cleanup is to be avoided. (Fall 1976 and Spring 1977.)

Result - The entire basis for the plan is built upon small scale actions by many individual citizens, organizations, and local governments to head off pollution at the source. This includes small scale surface runoff controls, stress on continuing water conservation after the drought and reusing water, source separation of garbage in the home and improved recycling resources, emission control equipment at many businesses and reduced travel by individuals. The only major construction program is the twenty year municipal treatment project list required by the law.

2. Finding - The plan must be as simple as possible, fair to all, and easy to implement. No major regional agencies are to be created. (Fall 1976.)

Result - The water quality, water supply, and solid waste plan proposals all stress simple actions by existing governmental agencies that are designed to be accessible to the public for review. Some major new air quality programs have been necessitated by the seriousness of the problem. No new regional agencies are recommended but increased coordination and cooperation among existing units is stressed.

3. Finding - We must carefully consider and balance the often conflicting environmental, economic, and social priorities. (Fall 1976.)

Result - The draft plan explicitly identifies and balances the impact of one environmental program on another. The economic, social, and financial/organization consequences of proposed control measures are included in the description of each control measure to ensure that knowledge of the costs and the benefits are reflected in the decisions.

4. Finding - Air Quality is the most serious environmental problem in the Bay Area and both land use and technological solutions must be fully explored. Virtually all Bay Area residents agree that air quality is a serious problem. The question of where to look for solutions -- to technology or to land use and transportation -- is a matter of great controversy. (Spring 1977.)

Result - The task force agreed that all feasible solutions must be explored. The air quality plan incorporates control measures based on improved technology and measures based on transportation and land development controls. All are required in order to meet the air quality standards in the Bay Area.

5. Finding - Public education is vital to environmental management programs. Heightened public awareness and environmental education is necessary for the public to understand and accept pollution control programs--and to suggest better ways to clean up the environment. (Spring 1977.)

Result - Environmental education is an important component of each of the management plans: oil recycling, water conservation, solid waste source separation, and reduction of auto trips are examples where public education will be vital to acceptance and implementation of the environmental management plan by individuals.

2. Advisory committee comments have been responded to and incorporated in reports; or else specific statements have been made explaining why recommendations could not be incorporated.
3. The population, job, and land development projections for the study have been built on a combination of regional totals allocated in accordance with local development policies which were prepared in combination with local government staff.
4. County round-table meetings and individual questionnaires and letters identified some specific concerns for the plan.

In the Fall of 1976 the criteria for later evaluation of plan recommendations was discussed at the county round-tables. A number of changes were recommended which, taken together with comments from the Assessment Advisory Committee, resulted in extensive revision of the criteria which will be used to evaluate the recommendations. The Fall and Spring county round-tables prepared a series of recommendations for the plan, most of which have been incorporated as described in the following section.

Comments from Public Discussion

Public discussions included individual and joint meetings with officials, group discussions, and responses to questionnaires. These views were added to the results of the county round-tables in the Fall of 1976 and Spring of 1977. At those two periods, members of the task force held round-table discussions in each county to build interest in the program and to obtain ideas and opinions to be built into the plan while the studies were still underway and the plan not yet drafted. The responses from those meetings, together with information from meetings with officials, group discussions, letters, and questionnaire responses led to five major findings for the plan.

1. Finding - The plan must address basic causes of pollution and stress smaller scale solutions and recycling. Large scale after-the-fact cleanup is to be avoided. (Fall 1976 and Spring 1977.)

Result - The entire basis for the plan is built upon small scale actions by many individual citizens, organizations, and local governments to head off pollution at the source. This includes small scale surface runoff controls, stress on continuing water conservation after the drought and reusing water, source separation of garbage in the home and improved recycling resources, emission control equipment at many businesses and reduced travel by individuals. The only major construction program is the twenty year municipal treatment project list required by the law.

2. Finding - The plan must be as simple as possible, fair to all, and easy to implement. No major regional agencies are to be created. (Fall 1976.)

Result - The water quality, water supply, and solid waste plan proposals all stress simple actions by existing governmental agencies that are designed to be accessible to the public for review. Some major new air quality programs have been necessitated by the seriousness of the problem. No new regional agencies are recommended but increased coordination and cooperation among existing units is stressed.

3. Finding - We must carefully consider and balance the often conflicting environmental, economic, and social priorities. (Fall 1976.)

Result - The draft plan explicitly identifies and balances the impact of one environmental program on another. The economic, social, and financial/organization consequences of proposed control measures are included in the description of each control measure to ensure that knowledge of the costs and the benefits are reflected in the decisions.

4. Finding - Air Quality is the most serious environmental problem in the Bay Area and both land use and technological solutions must be fully explored. Virtually all Bay Area residents agree that air quality is a serious problem. The question of where to look for solutions -- to technology or to land use and transportation -- is a matter of great controversy. (Spring 1977.)

Result - The task force agreed that all feasible solutions must be explored. The air quality plan incorporates control measures based on improved technology and measures based on transportation and land development controls. All are required in order to meet the air quality standards in the Bay Area.

5. Finding - Public education is vital to environmental management programs. Heightened public awareness and environmental education is necessary for the public to understand and accept pollution control programs--and to suggest better ways to clean up the environment. (Spring 1977.)

Result - Environmental education is an important component of each of the management plans: oil recycling, water conservation, solid waste source separation, and reduction of auto trips are examples where public education will be vital to acceptance and implementation of the environmental management plan by individuals.

Additionally, numerous specific ideas and suggestions from the public have been built into the plan including:

- o restricting autos in downtown San Francisco
- o separation of garbage at home
- o oil recycling program regionwide
- o increasing bridge tolls and taxes on parking places
- o small scale water conservation in the home
- o local residences within or close to industrial parks and shopping.

In May, 1977, the minority representatives on the task force expressed concern that ethnic minority views were not being adequately addressed by the task force membership and the work program. In response the task force expanded their membership to add two additional minority elected officials. A special study was made to identify the locations and issues affecting key minority and ethnic populations in the Bay Area. Another special study has defined affirmative action policies for the environmental management program. The impact of plan proposals on poor, ethnic minority, and the elderly will be part of the plan impact information.

B. Program for Review and Approval of the Plan

Plan review and approval was carried out in three major stages: early information and discussion, formal plan release and hearings, and plan approval by the local review bodies.

- o In September 1977, a Progress Report for the Environmental Management Plan was released for broad distribution and review. While not a formal draft plan, the report analyzed in detail the problems facing the Bay Area and contained preliminary staff recommendations with an initial assessment of impacts and costs. This report was reviewed by ABAG's Environmental Management Task Force (EMTF) and discussed at numerous meetings with elected officials, regional agencies, and public groups.
- o In December 1977, the ABAG staff released its 600-page draft plan for review by the EMTF, member governments, other public agencies, interest groups and the general public. The draft contained staff recommendations for policies, actions and responsibilities as well as assessment of economic and social impacts. Public review sessions were begun in January 1978. Formal public hearings started in February (including one at the ABAG General Assembly on February 8).
- o In March 1978, the Environmental Management Task Force completed its review and recommended a plan containing a number of significant amendments to the staff's draft plan. Member governments continued their individual reviews in preparation for final action at ABAG's April General Assembly, but complexities of the plan led to postponement of that meeting until June.

- o In April, ABAG's Regional Planning Committee heard testimony on conformance of the EMP to the 1970-1990 Regional Plan. Later that month, ABAG's Executive Board reviewed the plan, made further amendments to the EMTF recommendations, and endorsed the plan for approval by the June General Assembly.
- o On June 10, ABAG's Special General Assembly overwhelmingly approved the plan and sent it to the State agencies for action and transmittal to EPA for final approval.

As was the case with plan preparation, public participation in plan review and approval was conducted at the regionwide and countywide levels.

I. Regionwide Programs

A. Environmental Management Task Force

- o The task force met twelve times between September 14 and March 16 to review, discuss, and approve the recommended plan. The task force sponsored discussion workshops in each county on the preliminary staff recommendations during November. The EMTF started detailed review of staff-draft plan proposals in October. The reviews continued through March when the Task Force completed its recommendations for the ABAG Executive Board. The EMTF, jointly with the ABAG Executive Board, held informal public discussions and formal public hearings throughout the region during January, February, and March.
- o The task force's four policy committees met regularly during the review period. The Public Participation Committee reviewed distribution of draft materials and monitored responses from the public, arrangements for the formal public hearings, and preparation of the Affirmative Action policy proposals.

B. Regional Agencies

- o Regional agency representatives on the task force participated in the debate over the specific content of plan policies and actions. Staff from the agencies reviewed the draft materials, met with ABAG staff to clarify the proposals and suggest modifications. Virtually all of the affected agencies prepared policy positions which were expressed through their representatives on the task force and were also expressed directly to ABAG elected officials.

C. Technical Advisory Committees

- o The technical advisory committees reviewed all the staff analysis and many of the proposals before they were prepared in draft plan form. Many TAC members prepared specific comments and proposed amendments for consideration during the plan review and approval process.

II. Countywide Programs

A. Contacts with Local Elected Officials

- o The staff plan recommendations and subsequent revised recommendations from the task force and the Executive Board were regularly reported to mayors' conferences, county administrators' and city managers' associations as well to many individual elected officials and staff. Separate reviews by each jurisdiction to determine its position on the plan was urged.
- o All of the counties--including the non-member county--and 61 member cities reviewed the plan at regular or special meetings and prepared recommended changes. Some jurisdictions reviewed the plan three or four times. Mayors' conferences recommended positions on the plan to their cities. City managers' associations prepared recommendations for plan changes.
- o The staff draft plan was reviewed by member governments at the February General Assembly. As the time for final vote at the June Special General Assembly approached, county delegate caucuses met to set their position on plan amendments.
- o In two counties, groups of elected officials and planning commissioners held their own hearings and discussions to recommend a position on the plan.

B. County Lead Agency Programs

- o The county lead agencies conducted their own review programs for the individual county surface runoff plans. These reviews involved circulating the plan to organizations and individuals and holding numerous meetings and hearings. Each of the eight county boards met prior to recommending a surface runoff program to ABAG. (Note: San Francisco did not prepare a surface runoff plan since their overall wastewater program, now underway, includes this element.) In addition, many of the county lead agencies were active in reviewing the overall EMP with elected officials and groups in their area.

C. Contacts with Citizen Interest Groups

- o ABAG held more than 200 meetings with a variety of groups to review plan proposals. Additionally, many organizations held their own meetings to review the plan and prepare responses. In the end, 116 organizations proposed amendments. A number of labor, business, good government, and conservation groups assigned members or staff to work full-time on review, preparation of responses, and lobbying.

D. General Public

- o Heavy media coverage of the plan alerted thousands of citizens who weren't involved last year in plan preparation. Many became involved in review and approval of the plan through ABAG's workshops and public hearings throughout the region and through public hearings and discussions held by county boards of supervisors and city councils. During the review process, citizens were urged to talk with or write their city and county elected officials.

E. Citizen Alliance Projects

- o A number of organizations were selected for ABAG's Citizen Alliance Program, which gave them in-kind staff support and up to \$200 for plan review projects. The groups included the League of Women Voters, conservationists, inner city and minority groups, and recreation groups. These meetings and events enabled some 2,500 persons to learn about and respond to the plan.

F. Task Force Workshops

- o During October and November the task force liaison teams conducted nine public workshops throughout the Bay Area, which attracted approximately 250 persons.

G. Depository Libraries

- o Throughout the review and approval period, all basic documents were available in the twelve depository libraries. In addition, all city and county main libraries received copies of the full staff-draft plan and tabloids highlighting revisions.

III. Materials

A. Reports and Summaries

- o In mid-September, 5,000 copies of a Progress Report containing the findings and first draft recommendations were mailed to local governments, regional agencies, organizations, and citizens. A second printing of 1,000 became necessary, which was further supplemented by an additional 2,000 copies printed by two private industry groups for distribution to their members and the public. The full plan was released in mid-December with distribution of 1,500 copies to member governments, state and regional agencies, and organizations. An eighty-page summary of recommendations and a 110-page listing of all proposed policies, actions, costs, and impacts were printed separately for distribution. Eight thousand copies of a four-page tabloid "Plan Highlights" were printed for distribution plus copies in Spanish and Cantonese. Revised editions were printed to reflect changes made by the EMTF and Executive Board.

- o A number of county lead agencies also prepared summaries of the plan for use by governments and groups in their areas.
- o Many interest groups prepared and widely distributed their own reports and newsletters analyzing the plan. These groups included the Bay Area Council, California Council for Environmental and Economic Balance, Coalition of Labor and Business (COLAB), League of Women Voters of the Bay Area, Associated Building Industry of Northern California, the Sierra Club, Political Action Coalition for the Environment, and Concerned Citizens of San Mateo County.

B. Audio-Visual Programs

- o A 13-minute slide program (coordinated with sound tape) was prepared by ABAG. Two films, with only limited assistance from ABAG, were prepared by persons at the University of California-Berkeley and at Stanford. All audio-visual materials were designed for TV as well as discussion group use.

IV. Media

A. News Coverage

- o Following release of the Progress Report in September, media attention built to a crescendo of interest in early 1978 as the final compromises in the plan were worked out. During that time, every major newspaper, radio station, and TV station in the Bay Area regularly covered progress of the plan.

B. Feature Coverage

- o In addition to news programs on the EMP, Channel 2 and 5 aired half-hour interview programs while Channel 4 aired ten 5-minute broadcasts. Several local radio stations (including KGO, KNBR, and KQED-FM) aired half-hour interview programs. Thousands of column inches were printed in over 100 newspapers, although coverage was heaviest in about 20.

V. Overall Effect of Public Participation in the Review and Approval Process

- o The plan benefited from the most extensive public involvement in any Bay region decision to date. This was one of the first times that cities and counties had a chance to initiate the actions necessary to carry out State and Federal laws. Virtually every city and county took part. In addition to the activities of local governments, an estimated 15,000 citizens had a voice in the decisions. This far exceeds any previous efforts to involve the public, both in the numbers of persons and the range of interests represented. Some tangible results of the review and approval program are reported below.

- A. The assessment criteria for review and decisions on the plan policies, incorporated as a result of earlier public participation programs, proved very useful.
 - o The criteria, which emphasized not only environmental effects but identification of costs, responsibilities, economic impacts and social impacts, were used throughout the plan for the assessment. Findings were prepared for every policy (and for many of the implementing actions). Use of these criteria helped to bring out information responsive to the concerns of elected officials, interested groups, and the general public.
- B. Many public comments and announcements were received; staff responded to each.
 - o The draft plan released for review in December 1977 was 600 pages. During review and approval more than 1,600 pages of comments and proposed amendments were received. Each comment and proposal was answered in draft form by staff. The staff draft responses were reviewed by a select committee of the Executive Board to ensure adequacy and consistency.
- C. Extensive changes were made throughout the plan.
 - o As a result of the many comments and proposed amendments during the review process, virtually every policy and action in the plan was modified and a number of major changes were made.
 - o Assignment of responsibility was changed to clarify the fact that ABAG would gain no regulatory or program authority.
 - o Land use controls and many transportation controls were eliminated from the air quality plan.
 - o The provisions for addition of emission control equipment by industry were changed and provisions added to provide room for expansion in hydrocarbon emitting industries.
 - o The Federal air quality standards were challenged in view of the costs associated with meeting them.
 - o Bay Area elected officials went on record strongly insisting that there be equal enforcement of Federal standards in all parts of the nation.
- D. The plan now has strong public support.
 - o Even before the plan was approved by the ABAG General Assembly, a group of elected officials and interest group representatives worked with State legislators to introduce legislation to keep state agencies from changing the ABAG plan without local review.

- o The U.S. House of Representatives' Environment, Energy, and Natural Resources Subcommittee, chaired by Congressman Leo Ryan, held hearings on the Environmental Management Plan in late June. The testimony of elected officials and citizen groups, while critical of the Federal regulations, strongly endorsed the ABAG process and final approved plan.

III. PUBLIC PARTICIPATION PROGRAM IN THE CONTINUING PLANNING PROCESS

The public participation program for continuing planning will stress three basic ideas: an overall human/environmental balance in the Bay Area, user testing and evaluation of implementation measures, and the public as watchdogs of the plan.

A. Overall Human/Environmental Balance

The Bay Area will have a plan that reflects a comprehensive balanced approach to environmental management and human activities. A program will be developed to educate the public on this overall view, which is necessary to long-term life and prosperity of our region, stressing how human activities and environmental management must be related and balanced. The role of the individual citizen, business, and local government will be emphasized. Specific programs will be developed to show how and why some changes by individuals in daily living habits and special building and maintenance efforts are needed to continue the balance. Programs will be developed tailored for various audiences and population groups, working with youth and community groups--including inner city populations and aging--and with other regional institutions dedicated to environmental education.

B. User Testing and Evaluation of Implementation Measures

The plan lays great stress on cooperative action by many individual citizens, businesses, and local governments as the basis for long-term human/environmental balance. A way must be found to make sure that the separate implementation measures are as simple and effective as possible. Specific individuals and groups whose cooperation will be needed to carry out the plan will be invited to work with the staff and the policy makers to ensure that the measures are implementable. They will be asked to assist in evaluating the measures and making suggestions for improvements so that the measures will receive maximum acceptance and use. Some areas for concern could include: oil recycling, garbage separation in the home, installing emission control equipment, and reducing auto trips. Special problems of low income groups and elderly will be included. Findings and recommendations to increase acceptance and effectiveness of measures will be developed with the staff for possible revision.

C. The Public as Watchdogs of the Plan

The network of local officials, major public interest groups, and interested citizens who have participated in preparation and review and approval of the plan will be kept informed during the year of pending decisions by ABAG and other public agencies which will carry out the plan. The public will be alerted and urged to express its concerns in the many separate public agency decisions necessary to carrying out the plan.

A report on implementation progress to date, new proposals, and other issues affecting the plan will be prepared at the end of the first planning period. It will be circulated to local governments, groups, and individuals for comment at hearings prior to review and amendments to the Environmental Management Plan.

RECOMMENDATIONS OF LOCAL GOVERNMENTS

In addition to other requirements, EPA requires that the plan include the recommendations of all general purpose governments and other agencies affected by plan implementation. The draft plan was reviewed by those agencies and, as a result of comments and recommendations, was modified insofar as possible under Federal and State laws and regulations. Comments and staff responses are summarized in Volume III.

U.C. BERKELEY LIBRARIES



C124924441

